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ORIGINAL ARTICLES.

MEDICAL TREATMENT OF INEBRIETY.*

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The medical treatment of inebriety appears first in pictorial representations found in the ancient tombs of Egypt.

Here can be seen the states of stupor, nausea, vomiting, administration of drugs, showering by water, massage, flagellation and attempts to counteract the narcotism by external stimulation, also inunctions of the body, convalescence, and restoration, all faithfully outlined on these old tombs whose origin is lost in antiquity.

Fragmentary records of early Greek physicians contain references to the treatment of excessive wine drinkers.

The great philosopher and physician, Hippocrates, clearly recognized the disease of inebriety and left some very sensible rules of treatment.

From time to time, for the past twenty centuries, the question of the disease of inebriety and its treatment has come into prominence at intervals, then died away. Finally, at the close of the last century and the beginning of this, Dr. Rush of this country and several eminent European physicians affirmed the fact of disease, and laid down lines of treatment. But it was not until 1864 that the scientific treatment of inebriety became a practical reality, in the asylum at Binghamton, N. Y. From this time the rational study and treatment of inebriety begins.

Unlike other great medical topics, public sentiment has gone on in advance of scientific knowledge of this subject in its demands for means of treatment that shall control and cure the victim. In meantime, all rational study and treatment of inebriety has been obstructed by false theories and delusive misconceptions, that cling tenaciously as fogbanks along the shore.

Notwithstanding all the evidence, based on facts and experience, against the present methods of treatment, they still continue.

Temperance revivalists still boast of the number of pledged and converted as cured. As an evolution from this comes the empiric, with his secret specifics, boasting to have first affirmed the theory of disease, and claiming equally astonishing results with unknown drugs.

While the question of disease and treatment is passing through the period of renaissance, there are landmarks and clearly defined facts to guide all future studies.

Some of these outline facts grouped may help to clear away the errors that cloud the present conception of this subject.

The disease of inebriety, like other diseases of the brain and nervous system, follows a uniform movement, controlled by laws of dissolution, and conditions and causes that can be determined.

In the question of treatment, the first inquiry is, What is the present condition, the organic and functional derangements

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of the brain and nervous system, also nutrition and digestion?

Second: What are the special effects of alcohol on the nerves and brain?

Third: Is the use of spirits a symptom of other brain states? or is it an active factor in the causation?

Fourth: What neurosis and conditions of heredity are the active and latest factors in the history of the case?

From a study of these questions the lines of rational treatment will appear. Take a common case as an illustration. You are called to a case of gastritis. The man has drunk spirits for a long time and taken but little food; both digestion and nutrition are seriously impaired. Alcohol has affected the sensory and motor nerves, it has made the brain unstable, and lessened power of control, with evident hyperæmia. If the treatment is based on these symptoms alone but little can be expected. If we go back and find that the use of spirits began after some severe strain or state of exhaustion, or following as an entailment of some disease or traumatism, either physical or psychical, or originated in contagious surroundings and faulty conditions of living, new lines of treatment are indicated. If further inquiry shows a neurotic inheritance, direct as from alcoholic ancestors, or indirect as from insane, consumptive, epileptic, or any other neurosis, new indications appear.

The treatment of a case which checks the brain and nerve irritation by narcotics and, by the withdrawal of spirits and the use of eliminatives relieves the functional disturbances, is only partial. If at this period the pledge or conversion fills the mind by auto-suggestion with confidence that cure has taken place, or if the system is kept saturated with narcotics until the dominant idea of cure prevails or the mind is buoyed up on the delusive hope of final and permanent cure, the results are accidental and uncertain. Should final restoration follow the use of these means, the real causes of cure are unknown and belong to the realm of psychotherapeutics. Cases which recover after these psychical remedies are those in which the drink craze or symptom dies out or becomes exhausted, through the operation of inherent forces, and not by the last means or remedies used.

The medical treatment of inebriety must depend on the causes and conditions of the case. Without this knowledge all remedies are empirical. From such a clinical knowledge the physician may point out the lines from which a return to health may be expected. He can foresee the oncoming insanity of which the drink impulse is a clear symptom; or the paresis with this stage of exaltation and spirit excess; the acute delirium, the melancholia, the masked epilepsy in the dipsomaniac, and many other conditions that can be anticipated and studied. Many of these cases, in which to a superficial observer only the drink symptom is prominent, are found to have a uniform line of progress and termination. Take a hundred cases of inebriety and from a careful study of heredity, present condition, and the action of alcohol, etc., etc., a prognosis can be made that will be verified in ninety per cent. of all cases. The first question to be determined in a given case is the physical condition of the patient. As a rule all inebriates suffer from degrees of paralysis, both vaso-motor, sensory, and functional. Sub-acute inflammations and reflex irritations are common. The heart's action is variable, and the organ is enlarged. The liver is also enlarged and frequently the seat of low grade of inflammation. The stomach also suffers from both organic and functional derangements. Neurites are very common and of all degrees, usually called alcoholic rheumatisms and neuralgias. These are only the most general and prominent symptoms and call for general eliminative treatment. There is present in all these cases defective elimination of waste matter, also chemical changes of both cell and tissue, due in part to the direct action of alcohol and its indirect action on the nervous mechanism. As a result ptomaine poisonings, new soils for the growth of bacteria, also new centers of congestion and irritations occur. The bath corrects these indications by stimulating the cutaneous surface. Hot air baths or hot water baths, with rubbing once or twice a day, are the first essentials in treatment. Following this should be given what is termed internal lavage, or washing based on the same principle. This is best secured by saline and mercurial cathartics, with copious draughts of warm or acid waters. The patient should be placed in conditions where a certain

amount of control over his habits and conduct can be obtained. Either at home, under the charge of a trusted nurse, or in an institution where all the surroundings can be guarded.

All spirits should be removed at once, and a careful watch of the case be maintained to ascertain any organic or other diseases which may be masked by the use of spirits. Epilepsy, tuberculosis, paresis, hysteria, and other affections often come into great prominence when spirits are abandoned. The remedies most valuable following the removal of spirits and baths are the cinchonia bark infusions, nux-vomica preparations, together with the bromides, codeia, sulfonal, and other narcotics for the control of the nervous irritations. Strychnia is inferior to nux-vomica in my practice. Choral is unsafe and uncertain in many cases. All narcotics should be given in large doses for a short time and changed frequently and discontinued. Beef tea, hot milk, hot acid drinks, are often very effectual as narcotics, allaying nervous irritation. Rest and frequent massage with the baths, mild tonics, salines, and good foods are often all the means essential for restoration. In many cases the drink craze disappears from the use of these means alone. In a certain number of cases the origin of the drink symptoms is associated with syphilis and bad living, or the advent of syphilis has been followed by excessive use of spirits. In these cases mercury, arsenic, and the iodides should enter very prominently into the treatment. In a certain number of cases unusual states of stupor and delirium follow each other with explosive violence, unusual to ordinary alcoholic intoxication. A suspicion of specific poison followed by mercurial treatment gives the strongest confirmatory evidence in the good results from such means.

When inebriety is traceable to head injuries, from blows, heat, shocks, sudden emotional strains, etc., etc., sub-acute inflammation and degenerative cell and functional changes present are noted in the impulsive exhaustive drink symptoms. Both the prognosis and treatment should anticipate grave brain troubles.

Direct heredity, noted by inebriate ancestors, demands in the treatment total change of life and long periods of brain and nerve rest. Where the heredity is indirect, coming from allied states of brain degeneration, such as insane, idiotic, criminal, pauper, epileptic, and other profound brain diseases, the medication should be directed to lessen and favor return to states of health. In some of these cases the action of spirits varies widely. The insanity of the drink symptoms and the organic degeneration is so pronounced as to suggest various causes. These are the cases which become drug-takers of all kinds, and the cure or subsidence of one drug addiction is followed by another. These are the cases which appear in every community as shining examples of cure by "gold specifics," by prayer and pledge, and who very often secretly use opium or other narcotic drugs.

The hysterical confidence in permanent cure by unknown measures in a brief time is always open to grave suspicion of hysterical credulity or duplicity.

In neurotic cases where alcohol is quickly followed by intoxication, especially in young persons, a grave prognosis is present. The treatment should be a radical change of life and also include all the constitutional remedies found valuable, such as baths, tonics, foods, and mineral drugs.

In cases where cell and brain exhaustion from imperfect rest and food are present, the treatment must be nutrient and hygienic, rather than by drugs. Dyspepsia and the various disturbances of the stomach and liver, which are relieved by spirits concealed in bitters, are always grave troubles. Faulty or no mental control and unstable brain equilibrium, with its irregularities and exhaustion in inebriety require long persistent treatment. Many of these neurotic cases are benefited by mental treatment. There is a realm of psycho-therapeutics in which the medical man can foster dominant ideas and direct the activities of the brain along hygienic lines of living. Hypnotism has been tried in this way with indifferent success, so far. New surroundings, with change of thought and impulse, have been very patent in some cases. A primary condition in all these cases is exhaustion of the central brain structure. In most cases full restoration never occurs. The drink craze dies out, but the weakness and lowered vitality remain. In periodic cases the explosive character of the brain energy accumulating and discharging at

intervals suggests a line of treatment which will afford an outlet for this abnormality. In some cases restraint by drugs at the period of discharge is valuable; in others baths, exercise, cathartics seem to divert the energies and relieve the paroxysm. In one case a prolonged hot air bath, with severe massage, avails; in another, a long tramp in the country, with dog and gun, and severe exercise; in another, cessation of all work and rest in bed, assisted with bromides; another case abstains from food at this period, and in other cases eats to excess for two or three days, and thus avoids the paroxysm.

Various measures to control the drink paroxysm in these cases will depend on a study of the case. The premonitory symptoms are often very clear, and means of prevention can be provided. Where the case is in an asylum the application of means are more positive, but when the case is not under control greater skill is required. Many of these periodic cases drink only on holidays, or days of general rejoicing. If they can be carried over these periods they remain sober until similar occasions recur again. For many years I treated a case who never drank except during the holidays. A week before the approach of this season he was given mineral waters, nux-vomica, bromides at night, severe exercise and hot baths, with sharp rubbing, every day. This was continued for two or three weeks, then discontinued, and the drink craze was averted. In one case a man never drank except when on the seacoast; change of residence to the mountains was followed by perfect abstinence. States of contagion are very patent causes in some cases, and when recognized can be remedied. A form of hypnotic influence prevails, in which men drink to excess in certain surroundings and in certain company, and abstain where conditions are removed. Asylum care and study reveal many very curious facts along this line. Often pronounced cures follow from a careful study and recognition of these symptoms. The tendency to epilepsy, suicide, dementia, and other grave diseases should always be considered in such cases, and both local and constitutional remedies be persistently applied.

The continuous drinker, either in moderation or excess, has always the strong possibility of paresis, dementia, and cerebral hemorrhage before him. The continuous action of spirits is that of a paralyzant, disturbing and breaking up all the chemical and vital processes, either slowly or rapidly. The condition to be treated, after the removal of the active or apparent causes, is that of brain anæmia and profound central exhaustion, and degeneration of all the vital processes.

Institutional care and treatment of these cases are obviously the most important and practical. In the near future, when the disease of these cases is recognized, their early treatment at home by the family physician may be practical. His knowledge of the family history and surroundings will enable him to apply preventive means and measures that are impractical later on.

Public sentiment permits these cases to grow up in every community under the impression that all excess of spirits is simply moral weakness, within control of the victim. Thus, the period of curability is passed, and only when the disease and insanity of the victim is unmistakable are rational means applied. In an experience of seventeen years in asylums for these cases, I have rarely seen recent cases of inebriety coming for treatment. As a rule, all persons admitted to asylums are those who have exhausted every other means for relief, and who have used spirits until both the brain and organism are obviously diseased. To expect cure or permanent restoration in a few weeks from any form of treatment in such cases is impossible, or cure even from long medical care in any very large number of cases cannot be reasonably expected. Yet, the most reliable statistics show that fully thirty per. cent. are restored from institutional medical care extending over ten or twelve months. I am sustained by the best authorities in asserting that the inebriate is more curable than the insane, but the treatment must be based on his actual condition and extend over a long period of time, and be founded on general principles of rest and organic restoration.

The restraint and care of an asylum is of more value for its control of the surroundings, and the facility for the application of exact methods of treatment, than for its removal and restraint from alcohol. Rest and building up of brain and nerve tissue takes away the demand for alcohol

more positively than locks and barred doors.

The central object of all treatment is to remove the causes which demand spirits for relief. To silence this craze for alcohol is not curative any more than the narcotism of opium removes the cause of pain.

While the use of alcohol will create general organic degeneration, the demand for its use is always symptomatic of grave central irritations and lesions.

Locks and bars, pledges, chemical restraint by drugs, appeals to diseased higher brain sections, appeals to the credulity and disordered senses and emotions by "gold cures," or specifics, are all empirical. Yet, excepting imprisonment in jail, all these measures claim to be curative, and refer to examples whose conditions can be explained by other and more rational causes. The drink symptom is in many cases self limited and will change and disappear as a natural dissolution process, sometimes merging into organic disease of the stomach, heart, liver, kidneys, nerves, and brain. Cerebral hemorrhages, organic diseases of the lungs, kidneys, and nerves are very common entailments following the excessive use of spirits. The examples of cure by specifics or moral means are as a rule diseased, and the change of the drink symptom is followed by other concealed or pronounced organic lesions. The breaking up of the drink craze by narcotics and other powerful drugs will of necessity increase the degeneration, and directly predispose to insanity.

Another central object of all treatment is to restore the organism so that the narcotic effect of alcohol or other drugs will not be demanded. This is a brief outline of some of the more prominent facts in the treatment of inebriety. It will be evident that we have scarcely touched the subject. Only in the most general way have the real facts and principles of treatment been recognized. The noise and confusion of empirics and specific vaunters are only foam bubbles on the surface, whose only significance is the agitation and movement that presages the oncoming truth. No question of practical medicine appeals more strongly to physicians in every community for solution. What shall we do with the inebriates is answered to-day by quacks, pietists, politicians, and reformed inebriates. The mystery, credulity, and dogmatism of their answers is "confusion worse confounded."

From scientific studies by medical men the correct answer must come. They are the real teachers of the nature and treatment of inebriety, and yet to-day nearly half a million politicians, empirics, reformers, clergy, temperance men, and reformed inebriates are talking, writing, and teaching what inebriety is and how to cure it, and not a single score of physicians in this country have given the subject any study. What a startling reflection this is on medical science and medical men. Some of the facts which may be considered as starting points in the study and treatment may be outlined as follows:

The treatment of inebriety extends far back to antiquity. Public sentiment is to-day far in advance of any real knowledge of the nature and treatment of inebriety; hence, the armies of specific vaunters and temperance revivalists who claim such remarkable results. The disease of inebriety, like all other diseases, follows a uniform line of events, from certain special causes and conditions. Its treatment must begin from a knowledge of the present condition of the case and the effects of alcohol on the system; how far the use of alcohol is the symptom of other diseases and what heredity and neurosis enter into the case. A study of these and other conditions point out the lines of rational treatment.

The prognosis and treatment depend altogether on a clear apprehension of the case. The first thing is to place the patient in the most favorable conditions for cure, where all the surroundings can be helpful, and the best means applied to build up and restore his brain and nervous system. This may be done in an institution or at home under the care of a nurse.

The withdrawal of spirits and the use of baths and massage daily, with brain rest, are essential. Remedies such as the bitter tonics, mineral salts and acids, nux-vomica, and often the bromides and the iodides are valuable. The use of nutrients, with rest and baths, fulfill most all the demands of each case. Reconstruction of cell and tissue is the object to be sought.

Specific poisons such as syphilis, or injuries to the head, starvation, and other conditions require special lines of medica-

tion. Heredity and all its allied neuroses are constitutional states of degeneration, to be treated on general principles; change of living and surroundings, with appropriate medication to build up the entire organism, must be applied in all cases.

Restraint, protection, liberty, and the application of means to meet all the demands and abnormalties must be applied.

The public treatment of the pauper inebriates must be in military hospitals, especially organized for this class. The treatment for those able to pay can be more completely carried out in special hospitals, which will combine all the best appliances of science to meet the wants of each one.

The entire subject must be studied from a higher level, and along the line of accurately observed facts.

No Mistake In The Pulse.—Dr. B— of Virginia is a very able man in two branches of human endeavor. He is famed as a physician, and as a consumer of wines at dinner he is probably not anywhere excelled. Because of the latter distinction he is rarely called upon professionally after dinner by those who know him. It happened not long ago, however, that the sudden illness of the wife of one of his friends made it necessary that he should be summoned in a professional capacity late in the evening. The doctor came, visited the patient, and prescribed.

As he was about to leave the house the sick woman's husband asked what the exact trouble was. The doctor put on a long face, and seemed unwilling to gratify the husband's curiosity; but finally, after much insistence upon the latter's part, he observed, gravely, that the lady had been indulging in too much strong drink but that he had prescribed, and that the ill effect would soon pass away.

The revelation astounded the husband, and he expressed some doubt as to the accuracy of Dr. B—'s diagnosis.

"I am not mistaken at all," he replied, indignantly. "I have had much experience in cases of this sort, and cannot be mistaken. The pulse is an absolutely accurate indicator. Mrs. S—'s pulse at this moment is the pulse of the inebriate." With this he left the house, not at all pleased that Mr.—S should have chosen to doubt his judgment.

Mr. S—immediately repaired to the sick room, and was still further disturbed on entering to find his wife in a most hilarious state of mind, laughing so heartily, in fact, that he was almost of the opinion that Dr. B—was right after all. Upon inquiring of madam as to the cause of her mirth, he was informed that Dr. B—had sat at her bedside, looked at her tongue, and requested to feel her pulse. She had held out her hand, but the doctor had not taken it all, but had contented himself with placing the fingers of his right hand upon his own left wrist.

In short, the doctor had felt his own pulse.—*Harper's New Monthly Mag.*

Three Good Strokes.—An eminent New York divine, in the course of an address at a fraternity dinner recently, told this story. Said he: "I met a Brooklyn friend of mine a few days ago, and as he appeared to be feeling in an unusually exuberant frame of mind, I asked him why. He replied that he was happy because he had done three good actions the day before. He had met a poor woman on the street. The woman held a sickly-looking child in her arms, and she was weeping. Inquiry showed that she was weeping because she was convinced that her child was dying, and unbaptized.

"But,' said the Brooklyn man, 'why do you not have the child baptized?'

"'Because I have no money, and the fee for baptism is one dollar,' said the woman.

"Whereupon the good Samaritan handed the woman a ten-dollar bill, gave his address so that she could bring back the change—which she did return—and went his way.

"That is one good action,' said the Doctor. 'Now for the other two.'

"'Oh,' observed the Brooklyn man, 'they are all three in that one. First, I relieved the sorrows of a weeping woman; second the child of eternal salvation; and third—' Here he hesitated.

"'Yes?' said the Doctor. 'What was the third?'

"'Well,' said the Brooklyn man, 'the third was that I got rid of that vile counterfeit ten-dollar bill I had been carrying for more than a year.'"—*Harper's Magazine.*

COMMUNICATIONS.

ETIOLOGY AND PREVENTION OF DEAFNESS.*

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The writer submits herewith a table dealing with the reputed causes of the deafness of the pupils of deaf schools of nineteen states. This includes all pupils ever taught by these schools, excluding those for whose deafness no cause is assigned. The reports furnished are not scientifically correct. Some causes are recorded which are absurd. Effort has been made to eliminate these so far as possible. It is well nigh impossible to eliminate all. Until state institutions employ competent aurists so that the pupils may be properly examined, and until the reports of competent physicians can be obtained in preference to parent's, uncertainty will prevail, valuable information will be lost and hopes of prevention, based upon it, blasted. However, we hope to draw some lessons which we trust will stimulate further thought and investigation.

Our table deals with 9,897 cases; of these 3,559 were congenital in origin and from this we proceed to divide our list of causes into

I, Congenital,
II, Adventitious.

(*a*) Predisposing—
1, Age
2, Inflammations of upper air passages.
(*b*) Exciting—
1, Scarlet fever
2, Meningitis
3, Measles
4, Mumps
5, Catarrh
6, Typhoid fever
7, Scrofula
8, All others mentioned in table.

I, Congenital deafness is a fruitful source of study and investigation relative to its prevention. It is believed by many to be due to—

(*a*) Cousins intermarrying
(*b*) Persons congenitally deaf intermarrying.—This is on the same principle followed by breeders in securing peculiarities in stock.
(*c*) Relatives of deaf mutes marrying.

Therefore—

(*a*) Cousins should not marry.
(*b*) Persons congenitally deaf should not marry. Some fear a race of deaf mutes thus.
(*c*) Relatives of deaf mutes should not marry.

If a proper examination of these congenital cases were made the great probability is that they would, in a great measure, find their origin in *adventitious* causes which we now consider briefly:

II, Adventitious causes are either
(*a*) Predisposing, or
(*b*) Exciting.
(*a*) The predisposing causes are
1, Age
2, Inflammation of the upper air passages.

1, Age:—Deafness in the main originated in childhood. As far as possible the ages at which the children became deaf was ascertained.

*Read before the Miss. Valley Medical Association, Oct. 6, 1893.

AGES AT WHICH DEAFNESS OCCURRED (CONGENITAL EXCLUDED) (GEO. F. KEIPER.)

STATE.	Under 1	Under 2	Under 3	Under 4	Under 5	Under 6	Under 7	Under 8	Under 9	Under 10	Under 11	Under 12	Under 13	Under 14	Under 15	Under 16	Under 17	Under 18	Under 19	Under 20	Under 21	Indefinite
Texas	42	30	14	7	6	4	1	4			1	3	1									110
Illinois	297	429	131	81	60	33	38	18	11	16	14	3	10	9	1	1	1			1		
Minnesota	109	95	54	42	21	25	16	9	7	7	10											21
Kentucky	76	80	52	30	20	11	9	6	7	6	1	4	3	1	1			1				
Maryland	31	35	35	25	23	7	10	6	3	1	1	2	3	1								21
Colorodo	26	19	11	7	5		2	2	2	1	2											8
Indiana	155	219	158	101	85	70	49	38	25	21	10	10	11	5	2	6	3	1	1			232
N. Dakota	5	1	1	3		1																3
Michigan	5	17	17	7	7	7	4															
Ontario	92	112	97	56	34	25	13	10	3	9	5	2	2	4	2							107
Wisconsin		7	5		2		1	2		2												
Kansas	69		103	49	40	23	16	6	7	2	6	5	2					1				44
Missouri	191		139	81	60	38	38	18	4	4		4			4							222
Pennsylcania	3		8			9			9													
Mississippi	12	9	5	6	3	1	2			1								1				117
Totals	1113	1053	730	495	366	254	199	119	78	70	50	33	32	20	10	7	4	4	1	1		885

Alleged Causation of Deafness by State Institutions for Education of the Deaf. Collated by George F. Keiper, A. M., M. D.

STATES.	Number	Congenital	Indefinite	Scarlet Fever	Cerebro-Spinal Meningitis	Brain Fever	Spinal Fever	Gathering in Head	Measles	Catarrh	Accident	Typhoid	Brain Inflammation	Whooping Cough	Spasms	Scrofula	Pneumonia	Diphtheria	Quinine and Medicine	Hydrocephalus	Congestion of Brain	Malaria	Teething	Mumps	Inflammation of Ear	Congestive Chill	Paralysis	Typhus	Spotted Fever	Cholera Infantum	Spinal Congestion
Illinois	1280	588	155	155	333	110	5	55	54	53	52	56	28	24	21	11	15	16	15	12	13	10	7	8	10	7	4	1	....	4	2
W. Virginia	98	53	21	5	1	4	.....	.....	3	1	1	.....	.....	1	....	1	....	2	....	....	2	....	....	....	1	....	....	....	....	....	....	....
Minnesota	586	170	41	89	67	59	.....	.....	20	17	11	24	6	6	9	3	5	5	....	4	....	2	4	1	1	....	5	....	....	....	....
Kentucky	681	324	90	64	.....	68	. ....	50	12	18	13	9	1	13	9	9	6	2	7	5	....	5	....	1	1	2	2	....	11	1	....
Maryland	352	150	32	61	13	19	.....	6	4	3	13	11	.....	5	6	....	3	3	2	5	....	1	....	....	2	....	1	....	....	1	....
Ohio	430	120	79	39	.....	35	38	20	21	21	4	6	1	6	5	4	3	1	3	2	....	5	....	2	....	....	3	....	4	1	....
Colorado	117	26	19	13	13	6	.....	6	5	11	3	2	.....	4	....	....	....	4	....	....	....	....	3	....	....	....	....	....	....	....	....
Indiana	1800	593	202	148	.....	116	348	.....	45	41	30	35	75	19	18	20	7	8	2	10	5	....	2	14	....	15	....	....	....	1	....
N. Dakota	15	1	4	.....	.....	1	.....	.....	1	8	1	.....	.....	1	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	3
Michigan	343	83	37	31	20	18	56	.....	9	12	8	.....	2	5	....	....	....	1	1	....	....	1	....	2	....	1	8	16	....	2	1
Iowa	370	75	70	26	.....	27	93	12	4	3	20	.....	.....	1	2	1	7	4	2	....	....	2	1	2	....	....	..	5	10	1	....
Ontario	943	368	174	67	22	24	47	9	27	40	34	9	9	10	8	....	6	3	....	7	7	3	14	5	12	....	1	5	....	....	19
Wisconsin	44	22	.....	9	5	2	.....	1	.....	.....	.....	.....	.....	1	....	....	....	2	....	....	....	....	....	....	....	....	1	1	....	....	....
Kansas	668	206	80	47	112	43	.....	30	21	7	17	17	.....	10	6	4	7	6	4	3	....	....	2	2	....	6	1	....	....	4	....
Missouri	1232	418	289	51	192	57	4	36	25	11	27	26	10	13	12	10	5	7	11	....	4	10	4	3	....	....	2	....	....	8	....
Pennsylvania	63	34	.....	10	.....	6	.....	.....	.....	1	2	3	.....	.....	.....	....	1	....	....	....	....	....	....	....	1	....	....	....	5	....	....
Mississippi	266	107	91	12	10	7	.....	11	1	.....	.....	8	.....	1	1	1	....	4	....	1	....	....	....	....	1	....	1	....	....	....	....
Nebraska	374	118	58	36	48	25	.....	11	7	.....	6	15	4	10	2	6	5	1	....	1	....	2	....	....	6	1	2	....	....	4	....
Texas	235	103	43	2	2	15	.....	14	9	6	3	4	.....	2	1	2	1	2	....	....	2	3	2	1	1	....	2	....	....	1	....
Total	9897	3559	1489	858	838	642	591	271	268	253	235	225	136	132	100	72	67	65	61	41	34	47	41	41	36	32	32	28	30	28	25

ALLEGED CAUSATION OF DEAFNESS BY STATE INSTITUTIONS FOR EDUCATION OF THE DEAF.
COLLATED BY GEORGE F. KEIPER, A. M., M. D. (CONTINUED).

STATES.	LaGrippe	Erysipelas	Sores in Head	Nervous Fever	Bilious Fever	Throat Trouble	Croup	Small Pox	Winter Fever	Disease of Ear	Bronchitis	Worm Fever	Scald Head	Sore Mouth	Chicken Pox	Rheumatism	Cholera	Shingles	Inflammation of Bowels	Concussion of Brain	Swelling in Head	Appoplexy	Hemorrhage	Vomiting	Jaundice	Kidney Disease	Collection in Ear	Cancer	Exposure	Fright	Tubercular Meningitis	Malpractice	Eczema	Sore Eyes	Diabetes	Hives	Boils
Illinois	5	4		6	9			2	8	9	3	1	1	4	1		1	1	1	1		1	1	1	1	1	1										
W. Virginia		1				1																															
Minnesota	3		18	10				2					1																								
Kentucky		3	1		1	1						1																	1	1							
Maryland	4					1	2	2								1															1						
Ohio		1					3				1				1													1									
Colorado						1										1																					
Indiana	2	6				2	2	2			1			2		1																					
N. Dakota																1																					
Michigan		1			2		4		1									2																			
Iowa												1																									
Ontario					4						1	4	4	1			1		1																		
Wisconsin																																					
Kansas	2	2				1	1	2																													
Missouri		1				2	1							2																							
Pennsylvania																																					
Mississippi	1	1				3											1																				
Nebraska	2	1									1	1																									
Texas	3										1																										
Totals	22	21	19	16	16	13	13	10	9	9	8	8	6	7	4	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

The table shows that out of 5,514 cases, 4,011 became deaf before the age of 6 years.

[See tables on pages 630 and 631.]

2, Inflammations of the nose, pharynx, naso-pharynx and tonsils constitute, in the practice of aurists, the most frequent causes of deafness, our table to the contrary notwithstanding. From it we find catarrh and throat trouble to cause 266 cases or 2.7 per cent. This percentage is too low as all reputable aurists will readily admit.

In 1867, Drs. Roosa and Beard examined 296 cases of whom 200 has chronic pharyngitis and tonsillitis or nearly 68 per cent. It is indeed marvellous that owing to the remarkable prevalence of catarrhal troubles of the upper air passages, we do not have more deafness. I believe we may safely say that 70 per cent. of deafness among so-called deaf mutes may be directly attributed to diseases of the upper air passages and if they have received an amount of attention equal to that bestowed upon the diseases reputed to have caused the deafness, much trouble would be saved these unfortunates and some expense, the state.

Though the table be inaccurate yet when we take a summary of the deafness caused by the

(*b*) Exciting Causes
1, Scarlet fever
2, Cerebro-spinal meningitis
3, Measles
4, Mumps
5, Catarrh
6, Typhoid fever
7, Scrofula (syphilis?)
8, LaGrippe and
9, Throat troubles,

we may reason with some certainty.

These causes produced 2,393 cases or 24 per cent. Without the predisposing cause of inflammation of the upper air passages these exciting causes in a great measure would have been inefficient.

Some for argument's sake may say that these diseases produced trouble of the internal ear direct, without the intervention of catarrhal troubles to cause middle ear trouble. I reproduce from Dr. Spencer's article in the *Reference Handbook of the Medical Sciences*, a table comprising 4,102 cases upon this point.

Reporter	No. of cases	Exter. Ear	Mid. Ear	Inter. Ear.
Blake	1652	466	1128	58
Burnett	1187	279	868	40
Spencer	1263	243	978	42
Totals	4102	988	2974	140

The proportion of internal ear trouble is so small as not to require much consideration. Moreover the middle ear trouble may cause internal ear trouble.

Wines in making a compilation from the census of 1880 relative to deafness, finds out of 9206 cases, 4551 due to scarlet fever and meningitis alone.* In the table submitted we may regard errors present because the number assigned to scarlet fever and meningitis is too small.

PREVENTION.

The prevention of deafness demands first of all a removal of all predisposing causes. We have hinted at this partially in the previous discussion.

Concerning congenital deafness, if what has been asserted is true then the rules concerning marriage should be observed, legally, if not otherwise.

Catarrhal conditions of the upper air passages must be early relieved. In the main this requires surgical treatment, upon which a book might be written. However the principal causes to be removed are adeniod vegetations in the vault of the pharynx, and hypertrophic rhinitis and enlarged tonsils.

We have seen that the great majority of of the instructed contracted deafness before the age of six years. This excludes congenital cases. Whatever is to be done successfully must be done before the age of six years. Very much of the effort we put forth on these cases after the age of six is fruitless. Could aurists at the right time, put forth one fourth the effort they are called upon to do at an improper time, there would be better satisfaction on the part of physician and patient. There is nothing more unsatisfactory than treating an old case of deafness not due to necrosis of the ossicles. Chronic diseases mean inflammatory new tissue formation, which wherever it occurs is very difficult of removal.

A discussion of prevention so far as exciting causes are concerned would consume more time than would be justifiable. The watch word is prophyllaxis towards the infectious and contagious diseases. Of their skillful treatment you are all aware. Beware that the accompanying ear complications receive due notice and treatment.

*Ref. Hand-Book Med. Sci.

GALL-STONE COMPLICATED BY GASTRIC ULCER; AUTOPSY.

W. HENRY PRICE.

During the past summer while associated with Dr Phillip Marvel, of Atlantic City, a very interesting case presented itself, in which the differential diagnosis between gall-stones and hepatic cancer was rather more difficult than usual because of certain symptoms being absent, and on account of the patient having recently had his life insured, the autopsy involved more than a mere medical interest.

The history of the case is as follows: Benj. M., a colored man, fifty-one years of age employed in the Penna. R. R. yards, had been feeling badly for two months or more, and growing steadily worse, he called me in to see him on July 18, 1893.

By reason of the patient's ignorance accurate statements were difficult to obtain, but so far as the family history was concerned nothing could be elicited which bore upon the diagnosis of the case in question.

In regard to the previous history of the patient, he had enjoyed good health until about two months before my first visit, and had been doing hard work. He was temperate in all his habits.

His first symptoms of disturbed health were anorexia, general malaise and sense of great weakness. Then he became cognizant of a dull *constant* pain with tenderness in the region of the liver, and soon after he noticed that his stools were white, while the urine was black, as he expressed it. He however, kept at work and did not call in any regular physician, but contented himself by taking various patent medicines, now and then paying a single visit to first one doctor and then another, without diagnosis or relief.

Finally he became so weak that he was forced to take to his bed. At my first visit I found the conjunctiva and mucous membrane of the mouth deeply bile-stained, stools almost white and urine loaded with bile. He had lost flesh and strength progressively, and a physical examination revealed marked tenderness over the whole liver, although the organ was apparently not enlarged and no nodules could be felt.

The diagnosis of obstructive jaundice was made, with the possibility of a deep-seated malignant growth as its cause. Cancer was contemplated in view of the continuous loss of flesh and strength, the age and race of the man, the insidious onset, and, not least, the apparent absence of *paroxysmal* pain. Wishing to give the patient the benefit of the doubt, he was treated for catarrhal hepatitis by the administration of nitro-muriatic acid thrice daily, and potassium iodide in hot water between meals. Besides this, rest in bed, milk diet and the daily application of strong sinapisms over the painful area. After three days the stools became normal, urine was much lighter, conjunctivæ partially cleared up and the patient felt greatly better and highly gratified. Fractional doses of calomel were then ordered, which produced numerous loose stools and still further improvement in both subjective and objective symptoms, so that without permission he left his bed, went down stairs and took a walk. He soon realized that his ambition was greater than his strength, and was obliged to return to bed. This was followed by a return of all the symptoms, with clay-colored stools and signs of intestinal fermentation, no doubt from the absence of bile. The original treatment was resumed with the addition of capsules containing ox-gall to supply the necessary bile. Symptoms were again relieved except the tenderness and dull, constant pain, but he refused to take any nourishment because it distressed him. During this time fever had been more or less constant, the temperature rising as high as 102½°

The following day he began to spit mouthfuls of blood, and the next day he vomited about half a cupful of bright liquid blood. This was rather hard to explain and we were wont to ascribe it to venous stasis from portal congestion. Accordingly Rochelle salts was ordered taken before breakfast in hot water, with the idea of relieving the passive congestion. The laxative action of this brought away large clots of blood from the bowel which only served to make the case more obscure in its nature.

At this juncture the temperature fell

to 96½° which, of course, was explained by the internal hemorrhage. During the next two days more clots were passed per rectum and more blood was spat up, and he grew weaker and weaker and died in a semi-comatose state on August 14th, just four weeks after treatment was begun. For the last three days of life, the tenderness spread over the epigastric region and was so marked that palpation was impossible.

An autopsy was allowed because the insurance company, in an over-bearing manner, claimed that if cancer was the cause of death they would efuse to pay the money inasmuch as the patient had taken out his policy only three months before death, and in the nature of things the malignant growth must have been there before—a lame argument, as the risk had been accepted. However, as the case turned out to be gall stone, the money was paid without murmur.

On opening the body the abdominal organs and tissues were found deeply bile-stained, and about one quart of ascites present. Liver not enlarged and surface smooth. Strangely enough the gall-bladder was not distended but its left side was adherent to the anterior aspect of the stomach near the pylorus, and when this adhesion was carefully separated a small perforation was noted through this double wall, through which the bile had escaped into the stomach and thus prevented its accumulation in the gall-bladder. Perihepatitis had caused the liver to be tightly adherent to the diaphragm, and the stomach and several coils of small intestine were covered with inflammatory lymph. In the initial extremity of the common bile-duct, was tightly wedged a large spherical calculus, measuring three-fourths of an inch in diameter and weighing forty-five grains. No other stones were found. Upon opening the stomach, which was also bile-stained, four clear-cut, irregular shaped ulcers were found involving the mucous and sub-mucous coats, and measuring about one-fourth to one-third of an inch in diameter, and at the base of two of these a small blood vessel was exposed which had ruptured and which evidently had been the source of the hemorrhages. At two other positions white spots were found which were evidently beginning ulcers also. The other organs were normal.

In reviewing this case, several points impress themselves upon us: first of all, the *constant* pain and tenderness, which were the misleading symptoms pointing toward malignancy, were no doubt due to the perihepatitis. The absence of *paroxysmal* pain may have been due to the fact that the gall-stone was so tightly wedged in that it made no new attempts to pass.

Then the very unusual perforation which took place from the gall-bladder into the stomach, was most interesting and accounted for the stools resuming their natural color, an effect we supposed to be the result of treatment at the time, but which was really only a coincidence, and misleading because it made us think there might be present only a simple catarrhal hepatitis, and contra-indicated operative procedure. The ulcers were, no doubt, secondary to the hepatic involvement, but were immediately responsible for the fatal termination of the case by hemorrhage. They were, in all probability, the result of a highly depraved nutrition, for the patient took practically no nourishment during the last three weeks of life.

Bacilli and Nitric Acid.—Bacteriologists have been for some time familiar with the fact that the common bacilli produce nitric acid and nitrite, but instead of seeking in these secretions the cause of the destructiveness of the microbes, they have directed their attention chiefly to the poisonous albuminous substances they have discovered in "cholera culture," but which prove to be the contents of the dead bacilli, and therefore perfectly harmless so far as the genesis of the disease is concerned. It is the active product of their vital function, and not any lifeless residium of decomposition and decay that works the mischief. By a series of experiments on rabbits, Profs. Esmerich and Tabor have shown in a Munich journal of the 10th of June, that the symptoms of cholera and of poisoning by nitrite are perfectly identical in their action on the blood, and on every part of the organism. These statements of the learned professors are undoubtedly correct, and in looking to the ptomaines for the deadly poison, there is opened a very important avenue for the therapeutic study of the disease.—*N. Y. Med. Times.*

A CASE OF SENILE GANGRENE TREATED BY AMPUTATION.*

G. W. H. KEMPER, M. D., MUNCIE, INDIANA.

The patient was Mr. A. W. C., farmer, native of Ohio, and aged 73 years.

In 1893, an attack of rheumatism began and continued for about one year,—nine months of the time being confined to his bed. Although never very strong, yet he had led an active, stirring life. He had been a moderate drinker of alcoholic liquors. In the early part of the year 1891, he began to experience some pain in the left leg and foot. By the first of June, the pain was quite severe and accompanied with a sensation of chilliness. The pain gradually increased, and was described as stinging. He became quite a sufferer. About the first of September, he was removed from his home in Ohio to the residence of a daughter in Yorktown, near Muncie, and came under the professional care of Dr. Shively, of the former place.

About the 6th of September, a small, black spot appeared on the third toe of the left foot, and soon extended over the entire toe. At the same time the dorsum of the foot in the metatarsal region became reddened.

I first saw him on the 13th day of September, at which time the third toe was completely gangrenous. He was suffering a great deal of pain in the affected foot. It was evident that the arteries of the extremities were more or less atheromatous. His condition gradually and constantly grew worse and the quantity of opiates had to be increased in order to secure rest. Several circumscribed spots appeared over the leg and his general condition was not reassuring. The propriety of an amputation was discussed, and its chances were explained to the patient and his children. He decided to undergo amputation of the leg. I may add that an examination of the urine showed nothing abnormal.

On the 28th of September the gangrene had extended over the second and third toes and two inches upon the dorsum of the foot, and a well-marked line of demarcation was formed. The pulse was 92, temperature 100½°. At this date, assisted by Drs. Shively, Shields, Cowing and Coffin, I amputated the leg through the middle third, by the flap method. At the time, the discoloration on the leg had disappeared and the skin appeared healthy. Proper antiseptic precautions were observed,—ether being used as an anæsthetic. Upon making the section it was found that all the arteries were completely calcified, and not one was ligated. Two veins permitted more blood to escape than was desirable, and these were tied.

The operation was almost a bloodless one, and he soon rallied. He suffered considerable pain during the first twenty-four hours after the amputation, but never afterward except at dressings of the stump. He was supported by stimulants and generous diet.

The highest temperature reached was October 1st, when the thermometer registered 104°. He exhibited considerable delirium for a few days after the operation, and quite often somnolency was so profoundly marked that it required some effort to arouse him. He manifested quite a tendency to the Cheyne-Stokes respiration. On the third of October, about a tablespoonful of grumous pus escaped. From this time sloughing of the upper flap began, and continued until the tibia was exposed for a length of two inches. This portion of bone was soon denuded of its periosteum.

About one month after the amputation, the patient was seen by Dr. Marsee, of of Indianapolis, and, at his suggestion, we placed the stump in a tin splint, which contributed a great deal toward the immovableness of the tissues and aided granulation. The exposed bone gradually exfoliated and during the months of December and January was entirely separated. The soft tissues continued to throw out healthy granulations which slowly but gradually covered the extremity of the bone, and finally closed over the healthy skin, leaving a smooth and well-formed stump.

I saw the patient on the 17th of May, 1892, and found the stump in an excel-

* Read before the Miss. Valley Medical Association, October 5, 1893.

lent condition.* The circulation in the remaining foot and leg appeared to have improved since the removal of the diseased member. He was in an excellent state of health, but disposed to remain in the recumbent posture much of the time, because, as he remarked, "He had lain in bed so long that when he got up he ached and felt sore."

I have presented this case because of its clinical interest. A few points might be considered in connection with its study. The gangrene was due to the atheromatous degeneration of the arteries. The supply of blood to the extremity became less as the lumen of the arteries decreased by accumulated deposits upon their walls. Finally this supply was insufficient to nourish the extreme parts, and death necessarily followed. It was not associated with diabetes as many of these cases are.

Was amputation justifiable? I think the result of the case, although slow in process of healing, is a sufficient answer. While I am of the opinion that surgical measures were proper, I am inclined to think that we erred in not selecting a higher point of election for amputation. The red spots that were present on the leg early in the history of the disease, although absent at the time of the operation, indicated a low vitality of tissues unfitted for an ampntation.

Since I encountered this case, I have taken some pains to investigate the subject and note the observations of those who have had a more extended experience, and I feel that my researches may aid others,—hence I record them in connection with my solitary case.

Mr. Jonathan Hutchison was one of the first operators to call attention to the great value of high operations in senile gangrene.† He gives credit for earlier commendation of the operation to James.

The same month in which I operated, September, 1891, Heidenhain, of Germany, published a valuable paper based on twenty-five cases he had seen in the clinic of Küster, at the Augusta Hospital in Berlin.‡ These twenty-five patients underwent thirty primary amputations, three requiring double, and one a triple amputation. In ten of the subjects gangrene of the stump followed and secondary amputation was performed.

In a recent article,‖ Dr. Charles A. Powers has made an excellent summing up of these cases, and I quote his words: "Analyzing these cases, we find that four times, in circumscribed gangrene of the toe, Küster disarticulated, but that in every instance gangrene of the flaps occurred and extended to the foot. Lisfranc's amputation was secondarily carried out on one of these patients; he developed further gangrene and died of sepsis. A second was further amputated at the knee and again higher, the latter operation accomplishing cure. Both of the others were healed only after amputation through the femur. In three cases of primary amputation through Chopart's joint, the gangrene progressed in two and required femoral amputation. Primary amputation through the leg was employed six times: one case died from gangrene of the flaps and sepsis; three were saved by amputation through the thigh; the other two were healed after gangrene of the edges of the flaps and necrosis of the sawn surface of the bones. Of these thirteen low primary amputations, only two went on to healing, these in leg amputations; two patients died of gangrene of the flaps and sepsis; the remainder, nine, were saved by secondary amputation at or above the knee.

"Of the seventeen primary amputations through or above the knee-joint, nine were cured, while eight died of diabetic coma or heart weakness. Of the ten secondary amputations, all recovered. Separating, now, the diabetic from the non-diabetic cases, we find that of the eleven diabetic patients six were cured, while five died; and of the fourteen patients with simple senile gangrene, nine were cured, five dying. The fatal result was due to gangrene of the flaps and sepsis in two cases (one Lisfranc's amputation, one through the leg, both in the early days of antisepsis); in one case a man, aged eighty years, died at the end of nine days, from heart failure; one man, aged seventy-eight years, succumbed to hypostatic pneumonia; and another, aged fifty-two years, died at the end of nine days, with myocarditis, nephritis and ascites. The list shows that through the high amputation all patients were saved who were not severely afflicted with some general disease."

* He died of an acute disease in December, 1892.
† *Medico-Chirurgical Transactions*, Vol. 66, (1884).
‡ *Deutsche Medicinische Wochenschrift*, (1891).
‖ *American Journal Medical Sciences*, Nov., 1892.

In conclusion, I offer the following deductions:

1.—While the gangrene is confined to one or two toes, it is best to defer amputation. If the disease extends to the dorsum of the foot, amputation is proper.

2.—Amputation below the knee is rarely successful, owing to lack of proper blood supply and tendency to recurrence of gangrene in the stump.

3.—Amputation through the thigh will save a large per cent. of the cases, and especially so, when the subjects are free from a general disease. Mansell-Moullin observes that usually the thigh is small and wasted in the lower third; the artery is sound in Hunter's canal; the flaps are well supplied with blood; and old people, as a rule, resent operation very slightly; their tissues are not prone to inflammation.

4.—When amputation has been performed below the knee and gangrene appears in the stump, unless the patient is exhausted, it will be proper to perform a secondary amputation above the knee.

AN UNUSUAL CASE OF HEMORRHAGE OF THE UTERUS.

CLARA T. DERCUM, M. D., PHILADELPHIA.

The subject of these notes is an American girl of German parentage, aged twenty-six years, of a large well developed physique and by occupation a sales woman. Previous to this her present illness, she had always enjoyed perfect health. Her menstrual flow had without exception been normal in amount and duration, and it was only occasionally accompanied by a dysmenorrhœa which was scarcely sufficient to cause her any inconvenience. She menstruated normally in December, 1891, the flow beginning on the 24th of the month and continuing as usual for four days. Her next period, however, was delayed for nearly two weeks beyond the normal time, which was unusual in her case, not making its appearance until February 3rd, 1892. The flow was normal in character for four days. On the fifth day, however, instead of ceasing it became so profuse that from seven to eight napkins were required daily. As this condition continued for several days she finally sought medical advice.

Her history, which was obtained later, is briefly as follows: She had been gradually running down in general health for about one year and was undergoing a severe mental strain at the same time. This was in reference to breaking an engagement of marriage which she had come to regard as a very unwise one.

When she first consulted me on February 9th, I gave her a prescription containing hydrastis, ergot and dilute sulphuric acid, with the injunction that if the flow did not cease in a couple of days she was to remain at home. February 12th, she stated that the medicine had had no effect on the flow although she had remained at home for two days resting quietly. The mixture which she had been taking was continued with the addition of the deodorated tincture of opium, but as her stomach soon refused to tolerate it it was discontinued. Rectal suppositories containing one grain of opium and two and a half grains of ergot were substituted and administered every two hours. Her diet was non-stimulating, consisting chiefly of cold milk, luke warm broths and toast. In spite of this treatment the flow increased in severity. On the seventeenth of February a digital examination was made; the hymen was found intact so that the examining finger was only introduced with difficulty, the uterus was uniformly enlarged and flabby; the external os was so soft and patulous that the finger could be carried to the internal os without any trouble; the condition of the external genitalia as well as the entire absence of pain negatived the idea of an abortion, so that that as a factor in the causation of the hemorrhage could be safely excluded. Vaginal injections of water, from three to four gallons as hot as could be borne, were now given three times daily, a rubber tube attached to the bed pan carrying it to a bucket at the side of the bed.

The faradic current of quantity, one pole placed on the abdomen and the other

on the sacrum, was also used three times daily for periods of fifteen minutes. As this treatment was without avail in checking the flow of blood, another digital examination was made on the 21st., and the condition found unchanged. A bi-polar intra-uterine electrode was introduced two days in succession, and the faradic current of quantity used for fifteen minutes, this was followed by a bi-polar-vaginal electrode for the same length of time. This failed to stimulate the uterus to contraction as had been anticipated, the flow if anything increasing in quantity. Ergot and opium had been used continuously by the rectum during this period, one-thirtieth of a grain of strychnine together with the tincture of the chloride of iron had also been given three times daily.

On the 22nd, sixty-five grains of Squibbs extract of ergot were given hypodermically, this was repeated the following day. This also had no effect in diminishing the flow, which had now continued without intermission for twenty-one days, at times being profuse enough to saturate the bed. This steady drain had now reduced her from a healthy, robust looking girl to a physical wreck.

Realizing at last that if the flow continued at the same rate a few days longer the girl would die of exhaustion, I asked Dr. Eleanor C. Jones and Dr. F. X. Dercum to see her with me in consultation, which they accordingly did February 23rd.

After an examination as thorough as could be made without ether, we decided that the uterus was uniformly enlarged, but whether this was due to an excessive engorgement, or to some growth in the cavity, or to a rapidly growing intra-mural myoma could not be determined. On the morning of the 24th she was etherized with great care for we were afraid of heart clot in her then exsanguine condition. The sound passed three inches into the cavity of the uterus, which was now rapidly dilated, nothing abnormal being found either in its cavity or its walls. It was thoroughly curetted with a sharp curette and some hypertrophied mucous membrane removed. A solution consisting of two-thirds pure carbolic acid and one-third pure iodine was carried into the cavity on an applicator. The organ contracted on it with such force that its removal was only effected with difficulty.

Dr. Joseph Price examined her on the afternoon of the same day and stated that the uterus had contracted to its normal size. He had been called in to see her, for if we had not succeeded in checking the hemorrhage by the above procedure a gastro-hystorectomy would have been considered. Fortunately for the patient this was not required as the curetting and application of the solution above mentioned gave immediate relief, only a pale watery flow continuing for a few days.

A few weeks of complete rest in bed and a month at the sea-shore, together with mental quiet—for her engagement had been terminated—soon restored her to perfect health. During her convalescence iron and strychnine were freely used. Up to the present time her periods have been as formerly normal in amount and duration.

The obscurity of the etiology of the case is interesting, for why a young woman in apparently good health should be taken sick in this manner does certainly seem unexplainable.

Perhaps I may be open to criticism for not having resorted to more radical measures sooner, but there seemed to me in the beginning of her illness to be no special reasons for thinking that simpler measures would not effect a cure.

FRUIT.—Fruit will destroy the desire for alcoholic drinks. Oranges and apples have been found to be the most effectual cure for inebriates, and the more they eat of these luscious fruits the more the desire for drink will diminish, until at last it is completely crucified, and so far as that individual is concerned, obliterated. —*The Vegeterian.*

HOW TO EXTINGUISH FIRE.—Take twenty pounds of common salt and ten pounds of sal ammoniac (muriate of ammonia, to be had of any druggist), and dissolve in seven gallons of water. When dissolved, it can be bottled, and kept in each room in the house, to be used in an emergency. In case of a fire occurring, one or two bottles should be immediately thrown with force into the burning place so as to break them, the fire will certainly be extinguished. This is an exceedingly simple process and certainly worth a trial. *Med. World.*

THE ANATOMY AND SURGICAL TREATMENT OF INGUINAL HERNIA AND ITS BETTER METHODS FOR CURE.*

HENRY O. MARCY, M. D., LL. D., BOSTON, MASS.

The radical cure of hernia is a subject at present which engages the attention of surgeons with much more than former interest. Quite a number of operators upon both sides of the Atlantic have reported long lists of cases operated upon with varying, but very large percentages of resultant cures. The advance made in this direction is based upon the well-known rules of aseptic surgery, which permit of free dissection, laying bare the parts involved which permits, as in no other way, a reconstruction of the abdominal wall and the replacement of the cord; in a word, that the pressure from within the abdomen shall no longer be exercised in the direct axis of the opening. The work of Bassini in Italy, of Kocher in Switzerland, of Postkempsie in Russia, is quite parallel to and on the same line of research as that which pertains to a number of operators in our own country, notably Park of Buffalo, Bull and Cooley of New York, Fowler of Brooklyn, and Halsted of Baltimore.

The essential conditions for the restoration of the structures are agreed upon by all, namely: A free dissection in order that the cord may be lifted from its acquired pathological site, the canal restored in its obliquity, the internal ring closed from below upward closely upon the cord at its exit from the abdominal cavity, and the structures posterior to the canal reinforced and strengthened. Little by little this has been emphasized until now Halstead and Fowler have made the bold innovation of bringing the cord entirely external to the strong aponeurotic structures of the abdominal wall, to-wit: the fascia of the external oblique, making an entirely new canal for the spermatic cord. This innovation, however, is too recent to yet determine the full value of the procedure.

To Dr. Marcy is accredited the innovation of a free dissection, lifting the cord entirely from the canal and restoring the subjacent parts in a way to make the reformed canal at or near a right angle to the direction of the intra-abdominal pressure. He commenced his efforts in this connection more than twenty years ago, and in order to successfully accomplish the work believed it necessary to utilize sutures which could be buried in the tissues and there remain undisturbed. It seemed a ready inference that if animal ligatures could be applied to the larger arteries in order to produce their occlusion and yet remain without irritation or further disturbance of the parts, this should pertain also to the coaptation of the deeper structures of the body and their retention by a similar method. A series of histological studies upon the lower animals were undertaken by Dr. Marcy and the demonstration made complete that animal ligatures were more or less slowly absorbed and disappeared, leaving only a replacement of connective tissue structures at the site where they were imbedded. It was further demonstrated that this process varied very greatly; that with silk the suture was encysted and oftentimes was made unirritating in a permanent way; not seldom, however, such sutures became an irritant and they were slowly expelled by a process of proliferation, oftentimes after many months of localized pain, although the wound was entirely aseptic. This was true as a rule with silk-worm gut and silver wire. On the other hand, catgut, as ordinarily prepared, was untrustworthy by being absorbed too quickly and leaving the coaptated structures to yield before union had become firm. Chromicizing of the suture material after the manner of Professor Lister, however, renders the suture material much more resistant to the process of absorption, and as a consequence, makes it much more trustworthy. For many reasons, Dr. Marcy found that the tendon suture, as obtained from a considerable variety of animals, furnished a material of far greater value; that from the tail of the kangaroo being quite superior to tendon obtained from any other source.

Dr. Marcy illustrated his lectrue by a series of slides, reproducing the magnifi-

* Abstract of an Address on Surgery, delivered before the general session of the Mississippi Valley Medical Association, October, 1893, at Indianapolis, Indiana.

cent illustrated work of the old masters—Kemper, Cooper, Scarpi, Bougerey, and others. By a general consensus of opinion the profession is indebted to Dr. Marcy as an innovator in this field of labor. He has established the value of the buried animal suture, and had published his results quite five years before the report of Weith of Germany, to whom in Europe the credit is generally attributed. The essential principles of his operation for hernia have become universally accepted. The results of the work of a large number of the modern operators give from 70 to 90 per cent. of permanent cures.

In résumé, Dr. Marcy claims that the peritoneal sac, as a rule, should be resected after suturing quite to its very base; that the deeper structures which go to make up the posterior wall of the inguinal ring should be reinforced and restored to their original normal condition; that the external wound should be closed without drainage and the skin wound sealed with iodoform collodion. In his large experience, involving several hundred cases, he states that where the intestine has not been involved from strangulation or other cause, not one of his patients has appeared to approach the danger line, and that of the entire number which he has been able to trace, more than 90 per cent. have remained after one year permanently cured.

INVALID PENSIONERS AS LIFE INSURANCE RISKS.

H. T. GUSS, M. D., Washington, D. C.

An invalid pensioner may be a good and acceptable life insurance risk; and, conversely, a man who is a suitable subject for life insurance may be justly entitled to an invalid pension.

Much has been said lately in the way of adverse criticism and to make a comparison of the conditions appear ridiculous and reproachful to the veteran soldiers of our country.

But such statements and insinuations are reflections alike upon the veterans and the members of the medical profession as well, and are evidently made by those who are ignorant as to the qualifications of the applicants in either case.

The physicians of the country, in their varied functions as the medical examiners for the life insurance companies, as the examining surgeons for the United States pension office, and as the attending physicians of the applicants for insurance and the claimants for pension, are the responsible agents in all cases. All pensions are allowed upon the certificates of medical examinations or the medical testimony, more or less complete, filed as proof of the existence and continuance of disabilities, according to circumstances in each individual case. The exceptional cases not covered by this statement would not be over one or two per cent., and include those issued under service pension laws, etc. A thorough physical examination by a qualified physician is an invariable pre-requisite to life insurance.

Prominent physicians in many communities act as examiners for both insurance and pensions.

Whether the application is for insurance or pension or both, the physical examination and medical evidence will admit or reject the claim.

What is the condition and situation of a claimant for pension?

He desires that his physical disabilities shall all be noted, as the amount of his pension is largely determined by the extent and degree of disability from a certain cause or all causes. Like the patient in ordinary medical practice, he endeavors to describe fully and clearly the history and every detail of the disease or diseases of which he complains, and conceals nothing, so as to give the examiner a complete understanding of his condition. The examiner acts upon that which is reliable and confirmed by his examination. He has probably found some apparent evidences of disability from injury or disease or some functional disturbances, and recommends a pension.

Look now at the applicant for life insurance. He wishes to appear well and strong. He may declare he is in good health, and in all his personal and family history, without concealing any material facts he may be inclined to emphasize only those features which appear to him favorable to his case. He may or may not state that he is a pensioner or a claimant for pension. The medical ex-

aminer, having carefully gone over the formal application for insurance and reduced to writing a statement of certain facts relating to personal and family history as to health and disease, which is signed by the applicant and becomes a consideration of the contract, makes a thorough and complete physical examination. He finds the applicant without any apparent evidences of organic disease and recommends his insurance.

Supposing the same individual has been examined in each case, here is a paradox. The claimant for pension is disabled and pensionable; but, as an applicant for life insurance he is at the same time sound and insurable.

How is it? The liberal interpretation of "disabled" and "sound" at once renders the conditions much less antagonistic.

The insurance companies could not do business if they required a perfect physical development and condition and a faultless family and personal history, so few would be found eligible.

There is a general or average standard, but each case is passed upon its own merits. Every case has its individual equation, the several factors having different values and relations to be considered in their bearing on the particular case. In addition to the physical examination, the habits and occupation of the claimant are taken into account. Many companies, for example, will not insure men who are engaged in certain occupations, but may under certain conditions, insure one who has had a leg amputated at the knee if he is otherwise sound and whole.

Usually, the loss of a hand or foot or other lesser amputations the result of injury, the loss of an eye, total deafness of one ear, complete hernia not complicated, anchylosis of joints and permanent scars and deformities which are the result of gunshot wounds, and many other disabilities of a kindred nature, are not considered a bar to life insurance, but all of them would be pensionable.

Claimants are pensioned and justly entitled to pensions on account of these disabilities as well as for permanent evidences of rheumatism, chronic diarrhœa, malarial poisoning, the effects of scurvy and a host of conditions which may exist in a degree which almost every life insurance examiner would ignore in making his recommendation for insurance.

With regard to the question as to whether the applicant for life insurance is a pensioner or a claimant for pension, it may be noted that a careful examination of the special instructions to medical examiners recently issued by twenty-four of the most prominent life insurance companies of this country shows that only two of them direct attention to this point. In one of these, under the head of "questionable risks" are enumerated among others "persons who draw pensions on account of disease or present physical disability."

It might be presumed, from the fact that only two companies in twenty-four raise the question formally that it is regarded by them as a matter of little concern, but it must be remembered that the fact of an applicant being a pensioner will be brought out in nearly all cases in his statement made to the medical examiner, which, we have seen, is made a part of the contract.

Extended inquiry among personal friends and others who are drawing pensions has elicited the fact that quite a good percentage are insured and that in the majority of the cases the insurance was effected after the allowance of the pension and generally with a full knowledge of the fact and circumstances on the part of the insurance companies.

In the matter of pensions, our country has been very liberal, and its policy differs from that of most European powers in that pensions are confined almost exclusively to the military and naval service. "A pension is a gratuity and not a debt." It is held that the pension laws are beneficent in character and their interpretation should be broad and liberal. In cases appealed to the Secretary of the Interior it was decided that "an application for life insurance by a pensioner does not forfeit pension if disability still exists," and that a claimants' statement as to soundness is not a bar to pension."

From the foregoing it will be seen that the conditions are not incompatible. It should not, therefore, be considered that a pensioner must be an invalid or a physical wreck. The fact that a man receives a pension may be an important one to an insurance company—but merely as a fact. If its medical examiner finds him in good physical condition he can be insured and continue to draw a pension at the same time.

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SATURDAY, OCTOBER 21, 1893.

EDITORIAL.

HARD TIMES AND FREE MEDICINE.

From every part of this great and rich country the news comes to us of extreme stringency in the financial position of our *confreres* the general practitioners. Never was there a richer opportunity for the masses to play the pauper than now. The present panicy state of the money-market affords people an immense excuse for wholesale imposition on the profession. The conditions of the times will not give them free bread, free clothes, free transportation on the railroads or rent free, but they hie away to many of our too numerous hospitals and dispensaries for free treatment—advice, medicine and all included for nothing, or for "ten cents"—the figure fixed in certain palatial infirmaries.

The consequence of all this has been most demoralizing to the profession and the public. Practitioners reduced to a state of enforced idleness and grim want, are forced either to quit their profession altogether, or to "meet *steal* with steel," to open rival dispensaries, to advertise, or to drift into down-right quackery.

Many cases have come to our knowledge which go to prove that the practice in vogue in many of our largest dispensaries is a species of downright robbery and tends to work incalculable harm to the profession. Case after case is taken from among people of ample means and turned over to the hospital or to the college professor for his clinic, without a word being asked as to their mendicity or ability to pay anything at all. Cheap railroad excursion rates drain the outlying villages for miles in every direction.

This hydra-headed monster of indiscriminate free treatment must be siezed and strangled or we will soon see the profession of medicine dragged in the dust; open downright quackery will be rampant and integrity and honor in the healing art will be things of the past.

By no means let us withold our services to the poor and deserving, for humanity

compels us to gratuitously attend those without means. Nor let us strip the field of such clinical material as legitimately belongs to the teacher, but let the teacher not forget that he has no prescriptive right to filch from the struggling practitioner what justly belongs to *him*.

BACTERIOLOGICAL NOTES.

WATER FILTRATION AND CHOLERA.

Koch (*Zeitschrift f. Hygiene und Infectiuas krank heiten*, XIV 1893), brings out a large number of interesting facts concerning the relation of water supply to cholera. The statements in this article conform to the results which the author has heretofore obtained in his investigations of cholera and its prevention. The recent (1892) epidemic of cholera in Hamburg has furnished the opportunity for Koch to verify his theories concerning the relation of drinking-water and the transmission of cholera and typhoid fever. The importance of this subject in its practical application to our own water supplies renders a somewhat careful consideration of this article very desirable. The experiences of Hamburg, Altona and Wandsbeck are exceedingly instructive. These three cities which are adjacent to each other form practically one city excepting their water supplies are separate. Wandsbeck is supplied with filtered water from a lake which is not exposed to contaminating conditions; Hamburg gets its water from the river Elbe above the city, it uses the water in an unfiltered condition; and Altona is supplied with filtered water taken from the river below the city.

The points to be observed are, that while Hamburg was frightfully stricken with cholera, Altona and Wandsbeck were practically free from it. It is of further interest to consider that Hamburg took its water from a point in the river where its contamination was slight while Altona drew its supply from the river after it had received the sewage of 800,000 people. The line of demarcation was very striking. On one street which for a long distance forms the boundary, the Hamburg side was badly infected with the disease while the Altona side remained free from it. Still more singular is the fact, that one group of houses on the Hamburg side which were supplied with water from the Altona side remained uninfected.

Koch attributes the comparative freedom of Altona to the filtration of its water. Four-fifths of the cases which did occur in Altona were traced to an infection in Hamburg. The experiences of the present year, however, have shown that a filter bed of itself is not sufficient protection. The bed must be complete in every particular and the filtration must be conducted in the most thorough and painstaking manner and with frequent bacteriological examinations for a control on the filter. Epidemics of typhoid fever in Altona have demonstrated the existence of a connection between the disease and imperfect filtration. [The observation and results will cause the Pettenkofer school some trouble to answer or explain. —Ed].

"Giving the Quilt."—The Queen, says *Hearth and Home*, is an expert and indefatigable knitter. During the Egyptian campaign she and the ladies of the Household employed themselves in knitting quilts, which, at the end of the war, were sent to Netley Hospital for the use of the wounded. One of these, made entirely by her Majesty, and bearing an elaborate V. R. in the centre, was the coverlet *par excellence* of the institution, and in universal demand for a time. In assessing the claims of the candidates for the honor of sleeping under it, the medical staff naturally gave the precedence to the most severely wounded, and as the most severely wounded was the one most likely to die, very soon, alas! an evil omen attached itself to the distinction, the climax of which was reached one night, when a poor soldier, feeling some one touching his bedclothes, woke up with the perspiration pouring down his face, and cried out, "Oh, sir, do anything you like with me, but for God's sake don't give me the quilt!"

TRANSLATIONS.

PSEUDO-MEMBRANEUSE ENTERITIS AND ITS ROLE IN GYNECOLGY.*

In the *Annales de la Policlinique de Bordeaux*, May, 1893, Monod remarks that he has frequently noticed in women who are suffering from uterine disease the existence of intestinal symptoms characterized by colic more or less acute and by the discharge of membranous debris with the stools. At times the patients have noticed this phenomenon themselves, but usually they have only taken notice of it after an interrogation which has directed their attention to this special point. The relative frequency of this clinical observation has induced Monad to suspect that perhaps there exists between the uterine symptoms and the intestinal symptoms more than a simple coincidence. Pseudo-membranous enteritis considered as a morbid entity has provoked during recent years a certain number of interesting works where this affection is described as a distinct variety of enteritis, or more precisely, of chronic colitis. Van Swieten, Fernel, Woodward in America, and many others among whom may be mentioned Professor Potain, have insisted upon this special form of chronic inflammation of the mucosa of the large intestine, which may be readily recognized by the quite distinctive character of the products expelled with the stools. At times these are simply slimy or with filaments of a glutinous appearance; at times the patients expel veritable membranous ribbons which may present a length of 30 or 40 centimeters and which closely resemble often the debris of tapeworms. From this comes the various names which have been given to this disease, *glairous, dry, glutinous, pseudo-membranous colitis.* The authors have noticed the coincidence of this affection with hysteria and the neuroses. They have likewise called attention to the frequency of habitual constipation in the patients so afflicted. In certain cases the intensity of the pains added to the gravity of the general state of the patients has given rise to the error of diagnosis of ascribing the condition to the probable existence of cancer of the intestine. In 1888, Monad presented to the Society of Anatomy of Bordeaux the false membranes passed in large quantities by a woman 47 years of age, who was subject to very acute painful crises and who was considerably emaciated, and who had been treated by her physician as suffering from intestinal carcinoma. She was suffering, however, only from membraneous entero-colitis which was eventually cured. But if the clinical history of chronic colitis is to-day well recognized, the authors seem to be but little preoccupied in searching for the links which may bind this condition to an affection of the uterus or of its appendages. Monad has searched in vain in the classical treatises upon gynecology for any mention of pseudo-membraneous enteritis in the cortege of symptoms which accompany diseases of the internal genital organs of the woman. The characteristic clinical manifestations are as follows:

The *pain*, a nearly constant symptom, located most often towards the middle of the abdomen, in the region corresponding to the transverse colon. It may be localized in the right iliac fossa at the level of the cæcum. A characteristic feature of this pain is its intermittent and paroxysmal nature; the periods of crisis may vary between some days and several months; it may occur every month synchronously with the menses.

An habitual symptom of this form of colitis is the *constipation.* The authors have insisted upon the tenacity of this constipation which resists all the measures employed to combat it. Finally, in all of the patients there exist nervous manifestations in varying degrees. The patients are always very impressionable, offering the attributes of the most confirmed neuropathic state.

The *anatomo-pathologic characteristics* of the products eliminated by the intestines have been well recognized. At times there are thickened mucosities, which surround the fecal matter and adhere to them. More often there are veritable isolated membranes, very resistant, having the appearance of elongated rib-

* Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M. D.

bons or of placques or else gathered together in the form of fibrous bundles. The chemical and histological examination of these products shows, whatever may be their appearance, that they are always nearly entirely composed of mucous.

As regards the treatment of this condition, an affection so irregular in its course and of which the nature is so poorly recognized. it is plain to see that therapeutics is almost disarmed. The choice of an alimentary régime can not be along precise rules. Most of the patients have found that the use of milk was the only possible aliment during the period of acute crisis. [Alkaline mineral waters have seemed to be truly efficacious. To these should be added intestinal antiseptics in the form of naphthol or salol. The principal indication is to combat the constipation. For this purpose the oily purgatives are to be preferred. To the same end daily lavements, either simple or boracized, should be administered. Recently lavage of the intestine with an alkaline solution, through a long rectal canula has been proposed in the treatment of membraneous colitis. This is a way which seems rational. When the pains are very acute, the applications of revulsives upon the abdominal wall in the form of tincture of iodine or of repeated vesications, may have good results. In the wealthy clientele one should advise a thermal cure at Vichy, Vals or Plombières; for those patients who are particularly nervous, Néris should be preferred.

As to the relation existing between this membraneous colitis and affections of the genital tract, it is worthy of notice that pseudo-membraneous enteritis is much more frequent in the woman than in man, and these women show deviations in the position of the uterus with or without inflammatory exudations around the pelvic viscera.

HERNIA OF THE VERMIFORM APPENDIX.*

Dr. A. Brieger, Breslau, the author, considers only the cases which contain only the vermiform appendix in the hernial sac. The origin of such hernia can be classed under two heads, the same as all other hernia; namely congenital and acquired. First form is usually found to be caused by the adhesion of the vermiform appendix with the testicle during fetal life. A second cause, of equal importance, which may form during early fetal life, is the patulous condition of the tunica vaginalis; which may act as a channel through which may pass an appendix of abnormal length. Other predisposing causes are, a long mesentery to the appendix and displacement downward of the cœcum.

The author reports six cases of irreducible hernia of the vermiform appendix, the last having occurred at the surgical clinic of Breslau. He further describes eighteen cases of incarcerated hernia of the vermiform appendix, the last one a case also belonging to the above named clinic. He adds two cases in which the hernial sac contained the appendix and a portion of the omentum.

The author concludes his article as a result of his observations:

1. That herniæ of the vermiform appendix are of more frequent occurrence than is generally known.
2. It is impossible to make an accurate diagnosis of such hernia. When symptoms of incarceration occur, hernia may be considered in connection with the right inguinal or femoral hernia.
3. There is always an important point to remember, which is that the vermiform appendix frequently undergoes pathological changes which produce often marked complications.
4. These cases, even if irreducible, require early operations owing to the fact of complications arising from the appendix.
5. The operation, with few exceptions, consists in resection with accurate closure of the lumen, after the method of Mikulicz. Reduction can only be practiced in such cases where the appendix is normal. —*Arch. f. Klin. Chir.*, 1893

* Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

Gonorrhœa Occurring in Little Girls.*

Dr. Cassell, the author, has examined the discharge of pus from the genitals of thirty small girls and found gonococci in twenty-four. The youngest of these was seven months and the eldest eleven years. In the greater number of cases the author

was able to trace the infection to other members of the family. Dr. Cassell does not favor the idea that all these cases were infected by direct means, but believes that this class of people living in close quarters, may contaminate each other by means of bed linen, sponges or body linen.

The diagnosis is of importance. In all cases of gonorrhœal vulvo-vaginitis there was free discharge, and thick, creamy, greenish-yellow pus.

Therapeutically, the author treats the patients by local and general baths, placing the pelvis high for local injections, for which he uses an ear syringe containing 1 to 2000 of sublimate solution daily.

If the discharge becomes less profuse after two or three weeks he uses, two to three times weekly, a one to a one and a-half per cent. solution of nitrate of silver; these are continued until the cure is established, which usually occurs between two and three months.—*Berlin Klin. Wochen.*

ABSTRACTS.

A CONTRIBUTION TO THE HISTORY OF THE DISCOVERY OF MODERN SURGICAL ANÆSTHESIA, WITH SOME NEW DATA RELATIVE TO THE WORK OF DR. CRAWFORD W. LONG.*

LUTHER B. GRANDY, M. D., Atlanta, Ga.

The true story of the first discovery of anæsthesia, and of the circumstances connected therewith, has not yet been told in print. Reliable history is never written by the generation which make it. The generation which inaugurated the era of painless surgery has passed away; the participants in the long and bitter controversy over the question of priority have disappeared; and those of us who have since come upon the scene may now undertake to gather up the data relating to that great discovery, unaffected by favor and unbiased by prejudice.

In 1839, Velpeau, of Paris, described the attempts to find some agent capable of preventing pain in surgical operations as nothing less than chimerical; and in 1846, Sir Benjamin Brodie, of London, said: "Physicians and surgeons have been looking in vain, from the days of Hippocrates down to the present time, for the means of allaying or preventing bodily pain." Yet four years and a half before that statement was made, surgical anæsthesia, under the influence of ether, had become a demonstrated fact in a Georgia village, in the hands of Dr. Crawford W. Long. The claims of Dr. Long to the honor of this discovery have been presented to the world by no less a champion than the distinguished J. Marion Sims himself. Dr. Sims' article appeared in the *Virginia Medical Monthly* May, 1877; but it was hurriedly prepared on the eve of the author's departure for Europe, after an imperfect correspondence with Dr. Long and others, and contains some errors which the latter was anxious to have corrected. Upon these errors the claim has been raised that to another belongs a large part of the credit which the profession has accorded to Dr. Long.

My own interest in this matter is due to an accident, which need not be related here. For the purposes of this paper I have been kindly furnished by the Long family with all the documents, correspondence, and certificates which had been gathered by Dr. Long in support of his claim to priority. I have had access to papers which Dr. Sims never saw. I have talked with some persons, and corresponded with others, who were personally acquainted with Long and his work in 1842, and am thus able to present some features of the case hitherto unpublished.

The paper of Dr. Sims had its origin in an interview with Dr. P. A. Wilhite, of Anderson, S. C., October, 1876.† Dr. Wilhite was witnessing one of Dr. Sims' operations in New York, and remarked that he "assisted at the first operation

* From the *Virginia Medical Monthly*, October, 1893.

† Dr. Wilhite died in the early part of this year. I heard of his death, for the first time, after this paper was begun.

ever performed under the influence of ether." He then said that this operation was done by Dr. C. W. Long, of Jefferson, Ga., in March, 1842, while the patient was completely anæsthetized with sulphuric ether. He "presumed that he (Wilhite) was the first person who ever profoundly etherized any one," and then related how he had playfully and unintentionally etherized a negro boy to the point of complete anæsthesia in the fall of 1839, near Athens, Ga. Sims' article makes it appear that four young men—Wilhite Groves, and two Longs (relatives of Dr. Long)—were medical students in the office of Dr. Long prior to the events of 1842, and the author states that Wilhite's story about the negro boy encouraged Long in his belief that ether might be used for surgical purposes. These statements of Sims', based entirely upon information received from Wilhite himself, have caused the friends of the latter to manify his relation with this matter, and even to enter a claim in his behalf.*

As a matter of fact, Wilhite did not become a student of Dr. Long in his office until the latter had done several operations under ether. After graduating at the University of Pennsylvania, in 1839, Dr. Long spent one year in New York city, and returned to Jefferson, Ga., to practice medicine in the summer of 1840. It is not likely that he would have attracted four students to his office at the age of twenty-five. He had no students under him until after his marriage, August, 1842, and the first was his cousin, Dr. J. Long. In another place in Sims' paper, Wilhite is made to say that he assisted Dr. Long in operations "under the influence of ether in 1843 and '44, while he was a student in Dr. Long's office." Wilhite was not even present at Dr. Long's first operations. In the entire volume of papers before me relating to Long's first two or three operations, including the sworn statements of parties who were actually present, no mention is anywhere made of Wilhite. Moreover, not until years afterward does it seem to have occurred to Wilhite himself that he had any connection whatever with the discovery of anæsthesia. When Dr. Long's case was being argued before Congress, he obtained from Wilhite a certificate (Feb. 4th, 1854,) with these words: "I entered the office of Dr. C. W. Long, of Jefferson, Ga., in October, 1844, where I continued about eighteen months. Not long after I entered his office, and not later than 1845, I heard the said Dr. Long speak of having used sulphuric ether by inhalation, to prevent pain in surgical operations, he referring to a period of time before I entered his office." The remainder of the certificate states that he (Wilhite) had heard others speak of the operations, and he was under the impression that he had himself talked with the first patient upon whom an operation had been done. Between this certificate and the story as related to Sims, twenty-three years later, there seems to be an irreconcilable conflict.

Up to the time of Dr. Long's death, the relations between himself and Dr. Wilhite appear to have been very friendly. In his interview with Dr. Sims, in 1876, Wilhite said that "Long was the real and original discoverer of anæsthesia, and believed he would be so acknowledged if all the facts in the case were fully set forth." When Sims was in correspondence with both of them during the preparation of his paper, Wilhite wrote Long:

ANDERSON, S. C., Jan. 16, 1877.

"*Dr. C. W. Long*:

"Dear Doctor.—I have just received a letter from Dr. J. Marion Sims, of New York, stating that you will not write to him, or at least that he wrote to you about three weeks ago and had received no reply. If you don't do so soon it will be too late. He has been preparing an article for publication, and wants to place you right before the world. You have been apprised, I suppose, of the nature of the article. Why you have been connected with, and will be the leading spirit in, the article, happened in this way: While I was in New York last summer at one of Dr. Sims' private operations, several prominent physicians being present, I happened to remark that I witnessed the first or second operation ever performed under an anæsthetic. Every one said that I was mistaken, and particularly Dr. Sims. * * * After that I met Sims at his office and gave him such particulars as I could recollect of your first operation, and also urged your claims to the priority.

* See *Transaction of South Carolina Medical Associations*, April, 1893, and also "History of Surgery in South Carolina," by Dr. E. F. Parker, *North Carolina Medical Journal*, June, 1893.

He at once wrote you on the subject, and has since become very much interested in the matter.

"Now, Doctor, it is but justice to you, as it is due the world, that you give Dr. Sims such information as he asks for at once, as he is going to all this trouble only to place the proper credit of this great discovery on the man who justly deserves it. I earnestly hope you will comply with the doctors request as soon as possible. As I have been the means of giving the investigation of this subject its present shape, I am exceedingly anxious that you give all the information you can, that you may, and justly too, receive the credit of this great discovery. If you will act, it will certainly be so. Dr. Sims also wants a short history of your life, which don't fail to give.

"Hoping to hear from you, I remain yours, etc.

"P. A. WILHITE."

In reply to this, Long reminded Wilhite that he did not witness the operations, as stated, and asked him to send Sims a certificate similar in character to the one above quoted. Dr. Wilhite replied:

ANDERSON, S. C., Jan. 27th, 1877.

"*Dr. C. W. Long:*

"Dear Doctor.—Yours of the 22nd is at hand, and I have also just received a letter from Dr. Sims, which I will answer to-day. In regard to the certificate you spoke about, it will not be necesary, I think, as Dr. Sims has my statement written out in full. He was very particular to get all the points and facts I could recollect. In my statement *I did make a mistake about my being present at the first or second operation, which mistake I will correct.* (Italics mine—L. B. G.)

"If you still think proper, I will send a certificate. Let me know and I will give you any assistance in this great matter.

"Yours truly,

"P. A. WILHITE."

Sims' article appeared in May, 1877, and Long at once noticed the errors and the absence of the promised corrections. He requested Sims to correct the mistakes, but the latter replied that the "misplacement of a few names and dates would not alter the main facts in the case." He sailed for Europe in a few days, and the matter was dropped.

The above is sufficient to show, beyond the shadow of a doubt, that Dr. Long was the "real and original" discoverer of the anæsthetic properties of ether, *and that he could not have received any assistance or suggestions whatever from young Wilhite.*

It is not material to the strength of Dr. Long's case whether the negro boy incident ever happened or not. However, there is no evidence to show that he knew anything of it until nearly forty years after it is said to have occurred. I have lately had an interview with Miss Fannie Long, to whom Dr. Long had often told and retold the circumstances relating to his discovery. In his later years she became thoroughly familiar with every detail of her father's claim, and at his death he confided to her keeping all the documentary evidence in his case. She tells me that the above story was related to Dr. Long by Dr. Wilhite himself, in the presence of several of the family, when Wilhite was on a visit to her father's house in the spring of 1877. After hearing it, Dr. Long replied: "Doctor, this is the first time I ever heard of it."

There is living near this city an old gentleman, who still preserves a clear recollection of the events of that period, and to him I am indebted for the following letter.

EDGEWOOD, DEKALB COUNTY, GA.,
June 27th, 1893.

"*Dr. L. B. Grandy*:

"Dear Doctor.—In response to your inquiries, I will state that I was intimately acquainted with Dr. C. W. Long, and was frequently with him after he located in Jefferson, Ga., in the summer of 1840. He often administered the vapor of ether to us young men of the village for the exhilirating effect produced, and he told me that he became acquainted with this property of ether while a medical student in Philadelphia. Upon one occasion, in the fall of 1841, I think, he remarked to me that he thought ether could be used to prevent pain in surgical operations, and that he intended to make the trial at his earliest opportunity. I moved to Athens January 20th, 1842, and introduced the inhalation of ether among the young men in that place. Before this time the practice of thus taking ether was unknown in that section. At

Dr. Long's request, I sent him some ether from Athens in the winter of 1842. Shortly afterward he came to Athens, and told me that he had operated successfully under the influence of the ether.

"These are the facts as I now remember them. Up to the time that I moved from Jefferson, Dr. Long did not have any students in his office. If ether had been employed in sport in the neighborhood of Athens previous to my introduction of it there, I never heard of it. In reaching the conclusion that ether might be used in surgery, I do not think Dr. Long received any outside assistance. In my opinion, the idea was original with him.

"Yours, very truly,

"R. H. GOODMAN."

The circumstances which led to Dr. Long's first operation are thus described by himself, in a letter to Hon. D. L. Swain, LL. D., June 4th, 1866.*

"In December, 1841, a company of young men were in my office, and requested me to prepare some nitrous-oxide gas for inhalation. I informed them that I did not have the necessary apparatus for making it, but that I had an article which would produce like exhilerating effects, and which I considered equally safe. They expressed a desire to inhale it, and it was administered that night to most of the company. They were so well pleased with the effects that it soon became fashionable to inhale the ether, and I noticed persons while under its influence receive injuries which were sufficient to produce pain, but on inquiring of them if they suffered any pain, they uniformly told me that they had not. I noticed one young man receive an injury of the ankle-joint, which disabled him for several days, and he informed me that he did not feel the slightest pain until the effects of the ether had passed off. Observing these facts, I was led to believe that surgical operations might be performed without pain, and proposed to the gentleman on whom my first operation was done that if he would submit to the operation while etherized, I would charge nothing, or only a nominal fee, for operating."

This operation was for the removal of a tumor from the neck of James M. Venable, March 30th, 1842. A second tumor was removed from the same patient June 6th following.† The last clause in the above letter will explain the following entry in Dr. Long's ledger.

JAMES VENABLE.

1842.		
Jan. 28th.	Sulphuric ether	$ 25
March 30th.	Ether and excising tumor	2 00
May 13th.	Sulphuric ether	25
June 6th.	Excising tumor	2 00

The details of that first operation under ether have been published by both Dr. Long and Dr. Sims. Concerning the subsequent operations, not much need be said.

On *July* 3, 1842, Dr. Long amputated the toe of a negro boy for disease.

On *September* 9, 1843, he extirpated a tumor from the head of Mary Vincent, of Jackson, Ga.

On *January* 8, 1845, he amputated two fingers of a negro boy. The certificates of two witnesses to this operation state that the first finger was removed under the anæsthetic, and that the boy experienced no pain; that the second was removed without ether, and was very painful. It occurs to me that Dr. Long's conduct in this case proceded either from the fear of keeping the patient under the anesthetic too long, or from a desire to test the action of the ether. The latter view is made plausable from a statement of Long lower down.

If Dr. Long had promptly made public the results of his work, American medicine would have been spared the most tragically interesting chapter in this history. But, under the circumstances, he pursued a course both natural and commendable, and his reasons, as given by himself, were entirely cogent. He knew that he was the first to make the discovery, and he anticipated no controversy. His operations had all been of a minor character, and he only waited for an opportunity to test his anesthetic in capital surgery. But cases of heroic surgery were not common in those days in the practice of a young physician, in a thinly settled community one hundred and thirty miles from the nearest railroad. As far as it went, his work was well known in the small sphere in which he moved. Before me are several certificates—three of them

* Dr. Swain was the uncle of Dr. Long's wife, and at the time of this letter was President of the University of North Carolina.

† These operations were done in the presence of Jas. E. Hayes, A. T. Thurmond, W. H. Thurmond, E. S. Rawls, afterwards a practicing physician, and perhaps others. Certificates of these gentlemen are before me, besides also those of Venable's family.—L. B. G.

from physicians who were prominent in that section at that time—to the effect that "Dr. Long's operations were public and notorious in and near Jefferson, Jackson county, in the year 1842;" that he "made no attempt to conceal the character of the article inhaled, nor made any request that the results of his operations be kept secret."

Dr. Long's delay in going into print with his cases is thus explained by himself:*

"I was anxious, before making my publication, to try etherization in a sufficient number of cases to fully satisfy my mind that anæsthesia was produced by the ether, and was not the effect of the imagination, or owing to any peculiar insusceptibility to pain in the persons experimented on. At the time I was experimenting with ether, there were physicians high in authority, and of justly distinguished character, who were the advocate of mesmerism, and recommended the induction of the mesmeric state as adequate to prevent pain in surgical operations.† Nothwithstanding thus sanctioned, I was an unbeliever in the science, and of the opinion that if the mesmeric state could be produced at all, it was only in those of 'strong imaginations and weak minds,' and was to be ascribed solely to the workings of the patient's imagination. Entertaining this opinion, I was the more particular in my experiments in etherization."

In the meantime, Wells and Jackson and Morton were at work. With some assistance from one another, they arrived successively at the anæsthetic properties of nitrous oxide gas and sulphuric ether; and Morton, with an eye single to glory and business, secured a patent on ether under the name of *Letheon*. In the Massachusetts General Hospital, Boston, October 16, 1846, Morton admisistered his "letheon" to a patient for Dr. J. C. Warren, and a tumor of the neck was successfully removed. Other operations followed in quick succesion by the hospital staff. They were described in the *Boston Medical and Surgical Journal*, November, 1846, by Dr. Henry J. Bigelow. October 27th, 1846, Jackson and Morton published their letters patent, announcing the discovery of "letheon" as an anæsthetic; but their "letheon" was nothing more nor less than sulphuric ether.

Now began the celebrated "Ether Controversy," which I will pass over rapidly. Wells claimed the honor for himself, but having failed, both at home and abroad, to receive the recognition he sought, he ended his life by suicide Jan. 14, 1848.

When Dr. Long saw that he was anticipated in the matter of publication, he began at once to collect the evidence in proof of his own work. He obtained the affidavits of those operated upon, with dates, the sworn statements of witnesses and of those who knew of the operations, and his first article appeared, with some of these certificates, in the *Southern Medical and Surgical Journal* (Augusta, Ga), Dec., 1849.

In 1852, a bill was introduced in Congress to purchase Morton's patent for $100,000. This was opposed by Dr. Charles T. Jackson and the friends of Wells. Dr. Long's claims were also presented, and Sims says they were formidable enough to block the movements of Morton to get the appropriation. In 1854, Jackson made a visit to Long in Athens, and having satisfied himself as to the latter's priority in the use of ether, proposed to him (Long) to lay their claims conjointly before Congress as the real discoverers of anæsthesia. At the interview between them, Judge Andrews, of Madison, Ga., was present by Dr. Long's request. Dr. Long declined all of Jackson's suggestions, and instructed Senator Dawson, of Georgia, to make no compromise, but to place his claims solely on their merits. The matter drifted along with true congressional slowness until it was finally lost in the preparations for war. Morton was greatly disappointed at not receiving the reward from Congress. In New York, July 15, 1868, having fretted himself into a congestion of the brain, he drove furiously up Broadway and leaped from his buggy near Central Park. He was taken up insensible and carried to St. Luke's Hospital, where he died an hour later. It was not long before Jackson was committed to an asylum, hope-

* Extract from an unpublished (?) paper read before the Medical Society of Georgia, April, 1853.

† Dr. Long here refers probably to Dr. Gibbs, of South Carolina, who, at that time, was especially prominent among the class of physicians above alluded to. He, and others, claimed to have "witnessed operations on patients mesmerized and declare that mesmerism was the *ne plus ultra* needed to kill pain in surgical operations."—L. B. G.

lessly insane. After some years of confinement, he died, August 28, 1880.

The ether controversy was never reopened. Dr. Long continued to practice in Athens, and enjoyed a good patronage. Of course he regretted not having received the recognition he was sure he deserved, but his life was not saddened thereby. In regard to his discovery of anæsthesia, he had often said, "My only wish about it is to be regarded as a benefactor of my race." While on a visit to a patient June 15, 1878, he was stricken with paralysis, and, without gaining consciousness, died the next day. The Georgia Legislature has agreed to place his statue in the National Gallery of Statues in Washington. Dr. Long combined excellently the noblest qualities of the physician with the highest attributes of the gentleman. He knew that the credit of the discovery was properly his; but through all the long controversy he was content to rest his claims on their merits alone, and conducted his case with dignity and honor. He claimed nothing for himself that was not his; his character was known of all men, and was above reproach; he was modest, honest and truthful to the last degree; and he "kept the covenant of his heart's true life till his days were numbered."

Paul found in his travels many altars erected to as many gods, and in Athens another, "To the Unknown God." So the tourist can see, in Hartford, Conn., a bronze statue erected to the memory of Horace Wells; in Mt. Auburn Cemetery, Boston, a marble shaft to W. T. G. Morton; in Paris, a life-size marble statue of Crawford W. Long; and in Boston, a monument of white marble dedicated "To the Discoverer of Anæsthesia." It bears no name, but to one familiar with history it recalls the sad story of hopes that were disappointed, ambitions that were defeated, and lives that were lost, through their connection with the most humane and beneficent discovery of modern times.

Only one word more. Dr. Long's priority in the use of ether is beyond question. His discovery was the logical outcome of certain observed phenomena, and he proceeded to develop it in a scientific way in order to make assurance doubly sure. In the meantime, others less philanthropic gave a patented name to a common article, and, in some haste, announced a great "invention," which, later, they tried to sell for money. But, thanks to Dr. Sims' clear presentation of the evidence, the medical profession generally, I believe, have recognized the precedence of Dr Long's discovery.

It is a little surprising, therefore, that the author of a popular text-book on surgery should say, "I hope I may be pardoned for saying that the evidence in Dr. Long's favor seems to me quite inconclusive." I hope I may be pardoned for reminding him that the blindest persons *are those who will not see.*

A late writer in the *Medical Record* (Jan. 7, 1893) has read history to such little purpose as actually to state that Dr. Long himself never claimed to have "demonstrated painless surgery by etherization." Will the gentleman from New England kindly tell us, what was Dr. Long's object in going before Congress with his case when he saw that others were claiming the credit of the discovery? He might also explain Dr. Long's refusal to accept Dr. Jackson's proposition, and his instructions to Senator Dawson, above referred to.

People, and especially the inhabitants of those cities and sections where new discoveries make late impressions, part with their long-cherished opinions with great reluctance, and then only when the evidence becomes such as to convince the most unwilling. The present instance will be no exception. It is only to be expected, therefore, that there will remain some persons whose understandings will not be enlightened.

THE READING DOCTOR.—The best informed and most successful physicians are those who read the greatest number of medical journals for, in this way, a comparatively small amount of reading suffices to keep them conversant with current medical news and at a trifling cost.

REMOVING ODORS FROM THE HANDS.—A paste of ground mustard and water is a first-rate agent for removing traces of disagreeable smelling substances from the hands, such as salts of valerianic acid, cod-liver oil, etc. Huber claims that any oily seeds when powdered will answer this purpose. The smell of carbolic acid may be removed by rubbing with dampened flaxseed meal.

THE ACTION AND SAFETY OF CHLOROFORM.

H. A. Hare, M. D., and E. Q. Thornton, M. D., present the following summary of the results of their investigations on the subject.

From a careful study of the experiments so far reported, from studies made by one of us two years ago with H. C. Wood, and finally from this careful series of experiments we believe that the subject can be settled by the acceptance of both views in a modified form, or in other words that there is no real antagonism in the beliefs that chloroform kills by depression of the respiration or paralysis of the heart. We very positively assert that chloroform practically always kills by failure of respiration when administered by inhalation, provided, and this provision is most important, that the heart of the anesthetized is healthy and has not been rendered functionally incompetent by fright or violent struggles or, again, by marked asphyxia. By a healthy heart we mean one which has not undergone true fatty degeneration or has not so severe a valvular lesion as to make the slightest variation in the even tenor of the circulation fatal.

As positively as we assert that chloroform kills primarily by respiratory failure, so do we also assert that in excessive dose by inhalation it has a depressant effect on the circulation which is chiefly due to centric vasomotor, depression with final depression of the muscle itself. Depression of the cardiac muscle alone is never great enough to cause death when the chloroform is given by inhalation, but we believe that gradual asphyxia with the direct depression of the circulation may do much towards producing a fatal result, for vasomotor integrity is almost as necessary to life as an intact cardiac mechanism. This circulatory depression has been considered a safeguard because it was supposed to prevent chloroform going to the vital centers, but in reality it is no safeguard because profound circulatory depression is as great an evil as respiratory narcosis. That the circulatory depression may be dangerous is not only evident, but it is stated to be so by the Hyderabad Commission itself at the end of paragraph No. 8. This circulatory depression may be so profound that recovery is impossible, even with the most thorough artificial respiration a fact stated by the second Hyderabad Commission in paragraph 25, which we quote in this paper. This emphasizes the fact that we can not afford to totally ignore the effect of chloroform on the circulation and we can not consider the patient in danger of circulatory failure *only* when the respiration *ceases, but as soon as it becomes abnormal.* On the other hand, we should remember that even if chloroform has been given properly, the arterial pressure may be so low as to give no pulse in the radial artery and yet the circulatory system be ready to respond at once when the drug is removed. If, therefore, the chloroform is properly administered is there danger of its circulatory effect in man? We think that it is just at this point that our research and every other research on animals fails and necessarily fails, to produce a positive reply. The variation in the action of a drug on a diseased individual from its effect on the normal one is notorious, and we have no right to dogmatically assert that there is absolutely no danger of a circulatory depression in man, even if we found no evidence of failure in dogs, because there may be many idiosyncrasies or variations through disease in the human being which may completely reverse the results of experiments on healthy animals.

In other words, supposing that the amount of depression from very full doses of chloroform equals 25 units this amounts to little in the normal heart, but if the heart be depressed 25 additional units by disease the depression of 50 units may be fatal, particularly if to this 50 is added 25 units more of depression through fright and cardiac engorgement through disordered respiration or struggling. That true depression of the heart muscle may take place under chloroform seems to us most undoubted and we think that the tracings in every research that we have seen support this view. There is always a decrease in cardiac power manifested by the decrease in the force of the individual pulse beat and this passes away only if chloroform is removed early enough. We also agree with McWilliams that from the very first inhalation of chloroform there is a constant tendency to cardiac dilatation.

We come finally to all the important questions:

1.—Is chloroform a safe anesthetic?

2.—Are we to watch the pulse or respiration during the use of the drug, and what are the signs in the respiratory function indicative of danger to the patient?

3.—What is the true cause of death from chloroform?

4. Is death from chloroform possible when it is properly administered?

5. Under what circumstances is the surgeon to use chloroform in preference to the less dangerous anæsthetic, ether?

6. What is the best way of administering chloroform?

To the first question the answer is yes, for the majority of cases, provided it is given by one who is skilled in its use and not only knows how to give it but to detect signs of danger. It is not as safe as ether at any time, other things being equal, and never safe in the hands of a tyro.

To the second question the answer is, watch the respiration, *because as soon as enough chloroform is used to endanger the circulation the respiration will show some signs of abnormality either in depth, shallowness or irregularity.* In other words, the very effect of the drug may be to cause such deep and rapid respirations that an excessive quantity of the drug is taken into the lungs and continues to be absorbed even after the inhaler is withdrawn.

As there is always a fall in pressure under chloroform it is difficult to feel the radial or temporal pulse and the respiratory center recognizes the degree of arterial depression, which its sister vasomotor center has permitted by finding that its blood supply is insufficient. As respiration fails first it should be watched first. Finally, it is only by watching the respiration that we can tell how much chloroform the patient is getting. We do not watch this function for danger alone but to tell us of the dose.

The answer to question three is that death is always due in healthy animals to respiratory failure accompanied by circulatory depression, which latter may be severe enough to cause death even if artificial respiration is used skilfully. Death only occurs in the healthy animal when chloroform is given in excessive quantities.

Question four is impossible to answer for man from the basis of experimentation, as we can not produce identical diseased states in animals with those developed under various conditions in man. The physician having a case of heart disease should always advise the patient of the danger of any anæsthetic and he should remember, whether it is wise to tell the patient or not, that anæsthesia always means a step toward death even in the healthiest of men. In the event of a death under chloroform the physician is not to blame if he has taken proper preliminary precautions and given the chloroform properly.

Every one is agreed that the patient taking chloroform should have plenty of fresh air, and in India we understand that to all intents and purposes patients are operated on in the open air, at least as compared to the closed rooms necessary in America and Europe. This free supply of air is important, whether we believe death to be imminent from cardiac or respiratory failure, but this supply of air matters little to the patient if he does not breathe freely nor does the dose of chloroform amount to aught if it is not drawn into the chest. The dose of chloroform is not the amount in the inhaler but the amount taken into the chest and finally the amount absorbed by the blood vessels. The rapidity and depth of respiratory movements is therefore, as Lawrie asserts, the entire key to the situation. We watch a windmill over a well to see if it is pumping into a reservoir a given quantity of water. If the windmill works irregularly so that we know its pumping action is deranged we separate it from the pump until the wind blows steadily, in order that it may pump regularly. Similarly we withdraw chloroform, as Lawrie says, whenever respiration becomes disturbed in rhythm or when struggling disturbs it, because it is the first indication that the drug's action is uncertain and because there is no telling the dose which is absorbed. While watching the respiration will not warn us of a sudden cardiac arrest in fatty heart plus chloroform depression, neither will the pulse give us such warning and we are confident that the statement of the Hyderabad Commission that the *respiration should be watched is correct*, for we believe from a long series of observations that gradual cardiac failure never occurs

without producing respiratory changes from the very first. In other words, we do not believe that in a healthy heart chloroform can cause serious disorder without as a result of beginning disorder disturbing respiration and, second, that in a healthy heart a quantity of chloroform sufficient to disorder it will by its direct action disorder the respiration. If, as an extra precaution, one assistant watches the pulse while the other watches the respiration, very well; for though the respiration is the more important function the man watching the pulse might discover an irregularity which the anæsthetizer may not see reproduced in the respiratory action, but as divided attention generally means a slighting of both objects in view Lawrie is right in insisting on the pulse being let alone.

In answer to question five we have several points to offer: 1. Hot climates where ether is applicable and where a free circulation of air increases the safety of the patient; 2. Chloroform may be used whenever a large number of persons are to be rapidly anæsthetized so that the surgeons may pass on to others and save a majority of lives, even if the drug endangers a few, as on the battlefield where only a small bulk of anæsthetics can be carried; 3. Its employment is indicated in cases of Bright's disease requiring the surgeon's attention, owing to the fact that anæsthesia may be obtained with so little chloroform that the kidneys are not irritated, whereas, ether, because of the large quantity necessarily used, would irritate these organs. Quantity for quantity, ether is, of course, the less irritating of the two; 4. In cases of aneurism, or great atheroma of the blood vessels, where the shock of an operation without anæsthesia would be a greater danger than the use of the anæsthetic, chloroform is to be employed, since the great struggles caused by ether and the stimulating effect which it has on the circulation and blood pressure might cause vascular rupture; 5. In children or adults who already have bronchitis, or who are known to bear ether badly or in other words, have an idiosyncrasy to that drug, chloroform may be employed; 6. Persons who struggle violently and who are robust and strong are in greater danger from the use of chloroform than the sickly and weak, probably because the struggles strain the heart and tend to dilate its walls.

The safest method of administration is by Lawrie's or Esmarch's inhaler because these provide free circulation of air and do not distract the attention of the anæsthetizer from the respiratory movement by complicated apparatus. Apparatus much like these in allowing a free amount of air, are the Hyderabad chloroform inhaler, or open-ended cone with Krohne and Seseman's respiration indicator attachment. The Junker inhaler, even with its modifications, is too complicated and cumbersome and while less chloroform is wasted in administering the drug it must all be thrown out of the bottle afterwards. If used at all it should be used with the increased air supply and respiration indicator of Krohne and Seseman.

We agree so heartily with Lawrie's conclusions that we print them below:

1. The chloroform should be given on absorbent cotton stitched in an open cone or cap. (A depression made through the opening in the inside flannel bag will answer as well.)

2. To insure regular breathing, the patient lying down with everything loose about the neck, heart and abdomen, should be made to blow into the cone, held at a little distance from the face. The right distance throughout the inhalation is the nearest which does not cause struggling or choking or holding of the breath. Provided no choking or holding of the breath occurs, the cap should gradually be brought nearer to, and eventually may be held close over the mouth and nose as insensibility deepens.

2. The administrator's sole object while producing anesthesia is to keep the breathing regular. As long as the breathing is regular and the patient is not compelled to gasp in chloroform at an abnormal rate there is absolutely no danger whatever in pushing the anesthetic till full anesthesia is produced.

4. Irregularity of the breathing is generally caused by insufficient air, which makes the patient struggle or choke or hold his breath. There is little or no tendency to either of those untoward events if given with the chloroform. If they do occur the cap must be removed, and the patient must be allowed to take a breath of fresh air before the administration is proceeded with.

5. Full anesthesia is estimated by insensitiveness of the cornea. It is also indicated by stertorous breathing, or by complete relaxation of the muscles. Directly the cornea becomes insensitive, or the breathing becomes stetorous, the inhalation should be stopped. The breathing may become stertorous, while the cornea is still insensitive. The rule to stop the inhalation should, notwithstanding, be rigidly enforced and it will be found that the cornea always becomes insensitive within a few seconds afterward. It is only necessary to add that the patient should be so dressed for an operation that his respiratory movements can be easily seen by the chloroformist. In the climate of India this is not difficult to manage, but it is rather more so in the climate of Europe; so that in this respect, and this respect alone, the chloroformist in England and America is placed at a distinct disadvantage compared with the chloroformist in India.

NOTE.—Since writing this report two important papers upon this subject have appeared in the London *Lancet*. The one by Gaskell and Shore, in which they carried out a line of ingenious cross-circulation experiments, and from which they conclude that the fall in blood pressure seen under chloroform is due to cardiac rather than vasomotor depression; and another paper published by Lawrie, in the London *Lancet* for February 11, 1893, in which he refutes the statements made by Gaskell and Shore, and details, experiments which he believes combat those of the two investigators just named.

The concluding paragraph of Lawrie's latest contribution to the subject states the facts so clearly and is so in accord with what we have tried to set forth in our own report that we can do better than quote the paragraph:

"The Hyderabad Commission's work proves that, while Syme's principles are right, there is no such thing as a safe method of chloroform administration. It is no longer a question of the superiority of the London method or of the Edinburg method; absolute safety can be attained neither by watching the respiration nor the pulse for signs of danger—which are in either case proof of improper administration or of overdosing. Moreover, overdosing may take place whether the anesthetic is given on lint or on a towel or on a cap such as we use, or with Junker's or Skinner's or any other form of apparatus. The all-important point is that the breathing shall never be interfered with in any way. Safety under chloroform can unquestionably be insured, but it can only be so by attending to regular natural breathing; and, whatever method is employed, no one can deny that it is the bounden duty of the chloroformist to maintain natural breathing throughout the whole period of administration. To maintain natural breathing requires careful training and considerable experience, but if those conditions be fulfilled it is impossible to produce anything with chloroform but anesthesia; and the Hyderabad Commission has shown that anesthesia alone is entirely free from risk," provided the drug is not pushed too far and that the patient is in ordinary health. We would prefer to make the last sentence read: "Anesthesia can be safely produced by chloroform."—*Journal of the Amer. Med. Ass.*

A Table of Food Values.

Nourishment.	Energy.
1. Corn meal.	1. Corn meal.
2. Wheat flour.	2. Wheat flour.
3. Oatmeal.	3. Oatmeal.
4. Salt cod.	4. Sugar.
5. Beef. (neck).	5. Potatoes.
6. Cheese.	6. Salt pork.
7. Potatoes.	7. Wheatbread.
8. Wheatbread.	8. Cheese.
9. Chicken.	9. Butter.
10. Milk.	10. Beef (neck).
11. Eggs.	11. Milk.
12. Surloin.	12. Surloin.
13. Mutton.	13. Salt cod.
14. Salmon.	14. Mutton.
15. Oysters.	15. Eggs.
16. Salt pork.	16. Chicken.
	17. Salmon.
	18. Oysters.

—W. O. Atwater in The Forum.

DIAGNOSIS OF EPILEPSY BY THE URINE.—Dr. Gilles de la Tourrette claims that a diagnosis between hysterical epilepsy and that due to neoplasm can be made by the examination of the urine. He has found that there is an increase in the elimination of urea and phosphates during a convulsion due to a tumor, while the amounts excreted during an attack of hysterical epilepsy are diminished.

HYPNOTISM AND SUGGESTION.

The interesting experiments carried out by Krafft-Ebing, at a recent meeting of the Vienna Society for Psychiatry and Hypnotism, have aroused great interest in scientific circles. The experiments were made with the object of showing that it is possible, by hypnotic suggestion, to transfer persons into a former period of their lives, their mental condition, at the same time, undergoing a corresponding change, and that while in this state nothing is lost to their memories which cannot, by suitable influence, be recalled. The astonishing results obtained with Miss P. by hypnotic suggestion are the more seriously considered, because brought to notice by so learned an observer as Krafft-Ebing. The subject was a woman of 33 years of age. Krafft-Ebing hypnotized her, and transferred her successively back to the ages of 7, 15, and 19, restoring her, after each experiment, to her normal condition. In each case she behaved, spoke, and wrote in a way corresponding to the age which she imagined herself to be. The experiments were received, by the majority of those present at the meeting, with much skepticism. In decided contrast with the opinions of certain psychologists and neurologists, who, while they doubt the genuineness of the three states shown in Miss P. by the demonstrator, still admit their possibility, stand the views of Professor Benedikt, who addressed Krafft-Ebing's hearers in a way quite characteristic of his energetic manner: "Well, the whole thing is a swindle. The possibility that such things may be presented before a scientific assembly, and that they are not at once recognized as a clumsy deception, is accounted for by the fact that the physicians and psychologists present do not possess a true knowledge of humanity, and are unable to make a correct analysis of such proceedings. One of the most interesting subjects of psychology is the fact that intellectual, physically and morally sound women are not those who are fascinating to men, but, on the contrary, the hysterical women; this results from the fact that the hysterical women presents the feminine type, even to the verge of caricature, and, according to the law of contrast, calls forth the admiration of the masculine sex. These hysterical women also have the feminine peculiarity of profiting by the intellectual, moral, or æsthetic weaknesses of the male sex. It is, therefore, a great satisfaction to them to get the better of any enthusiast, 'poseur,' or learned man. When we also consider that idle, lazy members of the higher classes of society require a special science for themselves, which they can pursue without labor or special knowledge, it becomes evident why medical doctrines and occurrences which tickle the fancy and self-sufficiency of these idlers so easily become the fashion. The teachings of Kneipp are naturally more accessible than those of Skoda, and these gentlemen can amuse themselves with all the fantastic nonsense of modern hypnotism and modern suggestion, and look down upon their more-learned fraternity, who do not accept such vague and uncertain theories. I belong to those who have long been occupied with the study of hypnotism, and have used it as a curative agent. If I did not immediately decry the exaggerations originating at Nancy, it was because frequently, in medicine, the truth has only left its impress to posterity clothed in a heavy garb of errors. The phantoms and the humbug pursued for years I have combated with success in Paris, in 1889; in Bournmouth, at the meeting of English physicians, in 1890; and in Brussels, the same year. The misapprehensions into which some noble minds, such as those of Charles Richter and Luys, have fallen stand to-day under the judgment-sword of the scientific world, which not only combats hypnotism, but warns and protects itself against its exaggerations and misuses."

It may be here stated that this form of suggestion is not particularly new. Seven years ago, similar experiments were made in Finland by Prof. Karl Hansen, of Copenhagen, who, later on, also made further experiments of the same kind. Hansen transferred the subject to a period of old age, and it was most interesting to note how the posture and even the facial expression corresponded with the period suggested. In the Paris and Berlin scientific circles the Vienna experiments call forth much ominous headshaking. The opinion seems to be pretty general that Krafft-Ebing has been made the victim of a very cleverly perpetrated deception,—by no means the first.—*Ed. Univ. Med. Jour.*

CURRENT LITERATURE REVIEWED.

THE AMERICAN JOURNAL OF OBSTETRICS for October. Dr. Francis Foerster contributes a paper on

Comparative Microscopical Studies of the Ovary.

the paper in this issue being devoted to the study of the corpus luteum of pregnancy. He sums up the results of his comparative studies on the subject as follows:

1. The corpus luteum is a new formation of tissue, filling the loss of substance after the rupture of a Graafian follicle and fructification of the ovum.

2. In its production not only the wall of the ruptured follicle, but also the tissue of the ovary next to the follicle, and probably the remnants of the follicular epithelium, participate; thus the corpus luteum is considerably larger than the space occupied by the original follicle.

3. The corpus luteum is, in its earliest stages of development, of an embryonal or medullary or indifferent tissue, similar to that of the embryo in the first weeks of its growth.

4. The medullary tissue is the outcome of changes identical with those termed inflammatory. Fibrous connective tissue, smooth muscular fibres and blood vessels break up by proliferation of their living matter, both of the protoplasm and basis substance, into indifferent corpuscles, united among themselves, representing the embryonal tissue.

5. The human corpus luteum of the second month of pregnancy is composed of a lobulated, cortical portion of embryonal and a central portion of myxomatous tissue. The corpora lutea of the sow, the ewe, and the cow are non-lobular and uniform in structure throughout

6. The medullary elements, originally arranged in groups, produce by coalescence large, nucleated, protoplasmic bodies, the lutein or epitheloid cells of authors. They are pigmented by the hemoglobin of the extravisated blood corpuscles first filling the cavity of the ruptured follicle.

7. The large, coarsely granular, protoplasmic bodies should be termed "endothelia," and the tissue building up the corpus luteum "endothelioma"—*i. e.*, myxomatous tissue, in which the protoplasmic bodies persist instead of being infiltrated with basis substance.

8. The tissue of the corpus luteum is similar to that of a granuloma. The former is the result of a physiological, the latter a pathological reparative process. Both are myxomatous tissue.

9. In the corpus luteum the meshes of the myxomatous tissue remain throughout its persistence protoplasmic in the shape of coarsely granular, nucleated bodies, the endothelia. In the granuloma the meshes are soon infiltrated with myxomatous basis substance.

10. In the process of involution of the corpus luteum the endothelia break up into medullary corpuscles, which build up fibrous connective tissue. This process is often, but not invariably, accompanied by the appearance of clusters of hematoidin crystals.

11. The hematoidin crystals have a threefold source; red blood corpuscles contained in partly obliterated blood vessels; small extravasations of blood in the retrogressive changes of the venous and capillary blood vessels of the corpus luteum; and, lastly, the endothelia themselves, saturated with hemaglobin from their very origin.

12. The final result of the involution of the corpus luteum is cicatricial tissue, built up first by myxomatous, later myxo-fibrous, and at last by fibrous connective tissue.

The paper is illustrated by woodcuts of the microscopical appearance of the corpus luteum in the human subject and in animals.

Dr. J. Clifton Edgar presents a paper on

The Mechanism of Labor; Some Experimental and Clinical Observations.

As the result of his investigations he comes to the following conclusions:

1. The chief factor in determining anterior rotation of the lowest portion of the presenting part is the resistance of the pelvic floor.

2. Complete forward rotation of the presenting part is the rule in primiparæ; it often fails in multiparæ.

3. Excessive rotation of the head is a rare condition.

4. A permanent occipito-position is more common in multiparæ than in primiparæ, other things being equal.

5. Complete shoulder rotation occurs with about equal frequency in primiparæ and multiparæ.

6. In primiparæ and spontaneous delivery the anterior and posterior shoulders appear with about equal frequency.

7. In multiparæ and spontaneous delivery the posterior shoulder appears first more frequently than the anterior.

8. In spontaneous delivery the posterior shoulder is born first more frequently in both primiparæ and multiparæ—three times as frequent as the anterior in primiparæ, two and a half times as frequent in multiparæ.

9. The posture of the parturient does not appear to affect the mechanism of shoulder delivery.

10. Manual extraction of the shoulders was found to increase the percentage of perineal lacerations.

Dr. Giles S. Mitchell presents the report of

The Second Successful Cæsarian Section Performed in Cincinnati.

The operator did not flush out the abdominal cavity nor wash out the uterus. In closing the wound in the uterus, only one row of sutures were passed, which went through the peritoneal coat of the wound. The sutures were not passed till firm contraction of the uterus had taken place. The vagina was not irrigated, nor was any drainage tube put into the os, as at the time of the operation there was sufficient dilatation of the os to secure free drainage, since the patient had been

in labor for fourteen hours. On the twelfth day the patient had an attack of puerpural mania from which she happily recovered. The patient was allowed to convalesce without any meddling with the lochia or washing out of the wound. The lochia were normal and there was no odor from them.

Dr. Edward Sanders discusses "Chronic Oophoritis and its Treatment by Electricity." The author presents a number of statistics to show the futility of operation in this form of disease, contrasting these with the good results obtained by him from the use of electricity. He concludes "that for the cure of chronic oophoritis there is no remedy now before the profession which is the equal of electricity; the cure being obtained without any risk whatever to the patient, be the case simple or complicated, recent or of old standing, the only contra-indications being the presence of pus, the occurrence of acute peri-uterine inflammation, or the existence of old unyielding adhesions."

Dr. Joseph B. Bacon contributes a paper on the "Relation of Rectal Disease to Gynecology" in which he shows that the cause of pelvic inflammation often lies in ulceration of the rectum and urges that if the gynecologist would more thoroughly examine the rectum in those cases of pelvic abscess so intimately adherent to that organ that it is impossible to remove the sac without making a fistula, he would find, on looking up the history, that many of the cases originated from ulcers of the rectum.

Other papers in this issue are: "The Present position of Pelvic Surgery," by Dr. L. S. McMurtry; "The Relation between the Eyes and Diseases of the Female Genital Organs," by Dr. Boerne Breetman; "Five Cases of Laparotomy," by Dr. Lucy Waite; "A New Pelvimeter," by Dr. James B. Bullitt; and "The Removal of the Ovaries and Tubes in the Insane and Neurotic," by Dr. Archibald Church, a notice of which has appeared in THE MEDICAL AND SURGICAL REPORTER, for August 5th, 1893, page 227.

THE VIRGINIA MEDICAL MONTHLY

for October. Dr. John N. Upshur discusses

The Therapeutic Application of Chloroform in Labor.

He claims that chloroform diminishes the excitability of the muscular system and its capacity for work. If prolonged, it exhausts muscular irritability, it interferes with oxidation of the blood, and thus becomes toxic to the fetus. Its stimulant action on the vaso-motor center is doubtful. The indications for its use are in those cases where the pains are nagging and exhausting, in rigid os and in great nervousness and restlessness. The author believes that it should not be administered until the second stage of labor is well established (except in cases of rigid os), and at the latter part of that stage, and withdrawn as soon as the occiput has passed the ostium vagina. He considers that by the use of chloroform the uterus is left in such condition as to make subinvolution, with all the ills that follow in its train, almost inevitable. The spongy condition of the womb makes the patient much more liable to septic infection. By its use labor is often suspended, nor on the withdrawal of the chloroform will the pains return with desirable efficiency and instrumental delivery may be made necessary. The interference with the oxidization of the blood endangers the life of the child and he asserts that its use in natural labor increases the per centage of stillbirths. It is a question if death of the mother occuring within twenty-four hours after delivery, and reported as heart-clot, etc., may not have been due to the depression from too long continued administration of chloroform, plus the shock of labor. The author would lay down the proposition as an axiom, that whenever chloroform has been administered, a full dose of ergot should be given as soon as the head is delivered, or the second stage of labor complete. He would also suggest that it is a safe practice to give a full dose of quinine (gr. x) at the beginning of the second stage of labor when chloroform is exhibited, or belladonna, or one or more doses of nitroglycerin; especially will this last tend to antidote the nausea following chloroform administration. The hypodermic injection of atropine (gr. $\frac{1}{120}$) or sulphate of strychnia (gr. $\frac{1}{60}$) will undoubtedly add to the safety of the patient.

We must not lose sight of the fact that in the obstetric use of chloroform (which is usually conceded as the safest field for the use of chloroform), the patient is much longer under the influence of the anesthetic, and that the stimulus of constantly recurring uterine contractions, of a painful character, which are supposed to antidote the ill effects of the chloroform by constantly arousing the patient, may be absent or fail to exercise the stimulant effect usually a consequence of pain. The author urges that chloroform be placed on the same platform as other drugs and not be administered unless the indications of the case demand it.

Dr. Victor C. Vaughn contributes a paper on

The Causes of Typhoid Fever.

The author believes that there are many several germs that may cause ulceration in the intestines and an elevation of temperature in the lower animals. The germs obtained from the spleens of persons dead from typhoid fever, in this country at least, do not show uniformity in growth. For the last twelve or fifteen years the author has been called upon officially to investigate nearly every epidemic of typhoid fever which has appeared in the state of Michigan. In all cases the water supply has been examined, and during the last four years this examination has included a thorough bacteriological study. In no case has he been able to find in the water a germ wholly identical with that of Eberth. During the last year he has in each epidemic obtained the spleen of one or more persons whose death was caused by the fever, and in this organ he has found germs identical with those found in the water but not identical with the Eberth germ.

Dr. Reginald H. Sayre furnishes

A Contribution to the Study of Club Hand.

The paper is an abstract of that read by the author at the Pan-American Congress. Club-hand, he states, is very much less frequent than club foot. It may be acquired as a result of paralysis of certain muscles, or contraction of others from central nervous irritation, by cicatrices resulting from burns, or it may be due to injuries to the bones of the hand or fore-arm, or it may be congenital.

The congenital club-hands may be divided into three varieties:

1. Those where the skeleton is complete and well formed;

2nd. Where the skeleton, is complete, but ill formed.

3rd. Where the skeleton is incomplete and distorted.

Various writers say that the majority of cases come under the third head but the author's personal experience does not agree with this. In many cases club-hand is associated with club-foot or some other abnormality of development. The direction of the deformity may be either in flexion, extension, abduction or adduction or a combination of the two, the most frequent being the radio-palmar variety.

In those cases where the all the bones of the hand and fore-arm are present, the prospect of a good result are more favorable than where there is absence of one or more bones; and in these milder cases, when seen early, it is sometimes possible to restore the hand to proper shape and function by constant manipulation and rotation of the parts, which are to be held in their improved position by some fixed dressing, as the plaster-of-Paris bandage—the dressing being changed from time to time as the deformity is reduced.

Section of the tendons, ligaments or fascia may be necessary, if the case is not seen in the early stages. Many of these structures are so situated as to make open section preferable to the subcutaneous method; and if the flexor tendons have to be divided, it would seem better to operate in the fore-arm instead of the hand, and to split the tendon longitudinally, and after having gained such additional length as was needed by sliding the ends past each other, to suture them together once more.

Dr. Charles G. Cannaday contributes an article on "Subinvolution of the Uterus, and Its Treatment by Electricity" urging its use in this disease and stating that the trouble can be cured in one half the time required by other methods of treatment.

Dr. Luther B. Grandy furnishes an interesting article entitled "A Contribution to the History of the Discovery of Modern Surgical Anæsthesia," presenting some new data relative to the work of Dr. Crawford W. Long, whom the author regards as the real discoverer of the anæsthetic properties of ether.

Under "Clinical Reports," Dr. R. K. Smith contributes an interesting report of

An Atypical case of Cerebral Meningitis.

In this case the respiration failed thirty six hours before the heart ceased to beat; artificial respiration being kept up during this period.

The special features of interest in this case are: First. The mild symptoms—*i. e.*, the noticeable absence of pain until the day that he became unconscious; photophobia, delirium, muscular contractions, etc. etc.

Second. The sudden loss of consciousness and the high elevation of temperature at the same time; and then the rapid fall of the temperature.

Third. The cessation of the respiratory act while the cardiac function remained unimpaired for quite a while.

Fourth. The length of time his heart continued to beat after the normal respiratory act had ceased, which was thirty-eight hours and thirty minutes, during which time artificial respiration was performed. If the respiratory act was withheld, the surface would gradually get darker in color; the heart faster and weaker.

Fifth. The suspension of action of all the reflex centres, both cerebral and spinal, with the exception of the vaso-motor, cardio-inhibitory (?), vesical, and rectal.

The remaining papers in this tissue are: "Personal Experience in observing the Results of Good and Bad Sanitation in the Confederate States Army," by Dr. Bedford Brown; and "The Use of the Catheter During Labor," by Dr. R. A. Lancaster, in which the author urges the use of the catheter as a routine practice at beginning of the second stage of labor.

Extirpation of the Wounded Spleen.

Riegner (*Berliner Klinische Wochenschrift*,) reports the following interesting case: A boy, fourteen years old, fell from a high scaffolding, striking upon the abdomen. When seen the patient was extremely pale, and was vomiting a brownish fluid. The abdomen was markedly distended and very tender, and there was retention of urine. Rupture of one of the large abdominal viscera being suspected, laparotomy was performed, notwithstanding the shocked condition of the patient. The spleen, which was found completely torn through, was removed after ligation of the vessels. Two sub-cutaneous injections of 300 grammes of a 0.6 per cent. solution of sodium chloride were administered. Twelve days after the operation the sutures were removed. Several weeks later it was found necessary to amputate the left thigh for gangrene, but despite these two severe operations the patient recovered. At the present time there is a general enlargement of the external lymphatic glands, and also enlargement of the mesenteric glands. It would, therefore, appear as if the lymphatics had assumed the function of the spleen. The relation of the white to red corpuscles was at first 1:100; the absolute number of the red corpuscles rapidly increased up to normal; that of the white corpuscles did not decrease.—*Univ. Med. Mag.*

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE

Enchondroma of the Mammary Gland in a Bitch.

At a recent meeting of the Montreal Medico-Chirurgical Society, Dr. Adams brought before the Society a case of this condition on account of its rarity. Enchondroma has been very occasionally reported as occurring in the female, perhaps more frequently in the domestic animals. The present specimen, a bullet-like growth two and one-half inches in diameter, was obtained from a setter bitch. The growth would seem to be of less than a year's duration, and to have originated after a rather severe mammits. The bitch had a litter of puppies in February, 1892. There was some difficulty about the weaning and one of the teats became injured and inflamed. The bitch recovered, but in the autumn a small lump was observed in the previously injured teat. It was removed at the beginning of last month.

The structure of this tumor is typical, it is slightly lobulated, and the center is of bony hardness. Sections showed the lobules towards the periphery to be of hyaline cartilage, with some regions presenting stellate cells and less dense matrix; they were separated by bands of fibrous tissue. Deeper down the matrix became impregnated with calcareous salts, but even at the center there was not true bone. There were large channels in which ran the blood vessels surrounded by loose cellular structure, but the surrounding osteoid framework possessed neither proper Haversian canals or true lamellæ. Langlois, in the *Dictionnaire des Sciences Medicales*, gives a good account of these mammary enchondromata.—*Montreal Medical Journal.*

The Hereditary Transmission of Immunity Against Rabies, from the Father to the Offspring.

Tizzoni, Guido and Cetanni, Eugenia (*Centralbl. f. Bakt. u. Parasik.*) These investigations were made with the express purpose of determining the transmission of immunity by the semen of the father to the offspring The results were as follows:

(1) The father can transmit acquired immunity against rabies to the offspring through the semen.

(2) This occurs without any peculiar influence on the part of the mother, as the father can transmit the immunity to the offspring of different mothers.

(3) The immunity thus transmitted extends equally to all the progeny.

(4) The immunity of the young is less than that which the father possesses.

(5) The immunity transmitted through the seamen is permanent, in distinction to that acquired through milk or injected blood, which is transitory.—*Univ. Med. Mag.*

The Preventive Treatment of Tetanus.

Simmons says it is best to kill the tetanus bacillus while they are yet confined to the point of introduction. The following procedure is recommended in all cases of punctured wounds: All foreign substances are removed, and the wound thoroughly cleansed. With a gold hypodermic needle and an ordinary syringe he injects into the wound, if painful or sensitive, a 4 per cent. solution of cocaine, which is allowed to remain until its full effects are produced. He then draws out what may remain within the wound, and with the same instrument injects the following:

℞ Nitrate of silver..... grs. v.
Water. ..... ℥ ss.

Or

℞ Corrosive sublimate ..... grs. ij.
Carbolic acid..... grs. xv.
Alcohol ..... ℥ ss.

Internat. Jour. of Surg.

The Advantages of a Physician Dispensing His own Medicine.

1. To make a physician more independent.
2. On account of the habit of substitution prevalent among certain druggists.
3. To make sure of exhibiting pure and fresh drugs.
4. To prevent refilling of prescriptions without the physician's knowledge.
5. To show his disapproval of the practice of counter prescribing and the selling of patent medicines.
6. To center the pecuniary profits upon the physician.
7. To assure cleanliness in the preparation of medicines.
8. To educate the doctors to practical pharmacy.
9. To inspire confidence in the patient.
10. To check the growing use of proprietary medicine by the profession. Dr. Storrs. —*Medical Age.*

Calomel Soap in the Treatment of Syphilis.

Watraszewski (*Ann. de Derma. et de Syphil.*, 1893) describes the preparation of the soap as follows: The calomel, in the form of vapor, is mixed with a potash soap, in strength of one to two and one to three. It forms a soft mass of a white color.

From two to three grammes of the soap should be rubbed in every day.

The inunctions should be carried out in the following manner: The parts to be rubbed should first be washed with ordinary soap and water, and the patient then having taken a bath, the soap should be applied and rubbed in with a rotary motion of the hand for from ten to fifteen minutes.

The advantages claimed for this method of treatment are as follows:

1. Its application takes but little time.
2. The soap is odorless and colorless, and it does not soil the linen.
3. The inunctions never irritate the skin, except when applied too often in the same region.

The rapidity of cure corresponds in time to that resulting from the use of blue ointment.

Treatment of Infantile Convulsions.

M. Jules Simon advises the following method:

1. Relieve the digestive organs by a laxative, or by tickling the throat until vomiting occurs.
2. If the attack continues, give ether or chloroform by inhalation.
3. Administer within twenty-four hours the following anti-spasmodic mixture:

℞
Chloral Hydrate..... aa gm. 1
Bromide of Potash
Syrup of Codeine..... gtts 10
Tincture of Musk
Tincture of Aconite Root..... gtts 10
Orange flower water..... gm 100

4. If the attack is grave and prolonged, place the patient in a warm bath, and apply, with suitable antiseptic precautions, a small blister to the back of the neck, or to the epigastrium, leaving it in place not longer than three hours. As soon as vesication is established, substitute a poultice for the blister.—*Union Medicale.*

The Mechanical Treatment of Locomotor Ataxia.

Hirschberg (*Bull. Gen. de Therapeutique,*) concludes as follows with regard to the utility of Frænkel's plan of treatment of locomotor ataxia:

1. It is possible to greatly improve the ataxic movement in tabetics by the method of Dr. Frænkel.
2. The gymnastic exercises explain the reason of augmentation and development of muscular force in the affected members.
3. The exercises in making the muscular contractions under the control of the will of the patient ameliorate the inco-ordination.
4. In bettering the *morale* of the patient by giving him more confidence in his extremities, the persistent ideas of pathophobia which cause so much misery in tabetics are dispersed.
5. The treatment is indicated in all stages of locomotor ataxia. Best results, however, are obtained when it is instituted before locomotion becomes completely impeded.
6. Treatment is contra-indicated when the course of the disease is very rapid; that is to say, when the clinical picture is completely developed in less than two years; also, when the general condition of the patient is particularly bad, and especially when the articulations are affected.
7. The treatment does not exercise any influence on the cardinal symptoms of tabes dorsalis, with the exception of the ataxia.

It might be said that Frænkel's treatment in principle distinguishes three categories of movements:

1. Simple muscular contractions; that is to say, of one muscle or a physiological series of muscles.
2. Simple co-ordinate movements; for instance, touching the end of the nose with the index finger.
3. Complex co-ordinative movements, such as writing.

In applying the treatment, the practice is to begin with the simpler passive movements, then gradually assume the more complex.—*Jour. Nerv. and Mental Dis.*

Ord (W. M. and White (E.) on Certain Changes Observed in the Urine in Myxœdema after the Admistration of Glycerine Extract of Thyroid Gland.

From a careful study of a case, the following deductions are made:

1. That the urine is increased in volume.
2. That the nitrogen excreted in the urine exceeds the total quantity of nitrogen in the food.
3. The phosphoric acid and chlorine eliminated are practically unaffected.
4. That the increased nitrogenous excretion is chiefly in the form of urea.
5. That the body weight is rapidly diminished.
6. That the temperature of the body is raised.—*Brit. Med. Jour.*

Uffelmann (J.). Can Living Cholera Bacilli be Carried with Dust through the Air?

Thin layers of finely powdered garden-earth, fine white sand, street- and floor-sweepings, and mixtures of dust and diarrhœal discharges, were moistened with cultures of cholera bacilli. They dried in fourteen to sixteen hours, and were then pulverized. At various intervals of time cultures from these mixtures were obtained by inoculation and by allowing the dust disturbed by being blown upon to settle on gelatine planes. The results of all the experiments were the same. While the bacilli died rapidly during the process of drying, some of them were still alive after the lapse of twenty to twenty-four hours, if sun-light were excluded, were carried about with the dust, and developed colonies. As an exception solitary bacilli survived three days. The lesson is clear. Although the slight liability of the materials soiled by choleraic discharges to the formation of dust, and the rapid death of the bacilli in drying substances (materially hastened by the action of sunlight), render the propagation of cholera in this mode exceptional, it is, nevertheless, possible for living cholera bacilli to be carried with dust through the air, and to infect food, water of streams, etc., or to enter our mouths.—*Berliner klin Wochens.*, June 24, 1893.

SURGERY.

Ingrowing Toe-nail.

Dust over the granulations at the bottom of the sulcus with aristol or iodoform and on top of this put a small piece of lint or cotton.

Take a piece of rubber bandage one-half inch wide and twelve to fourteen inches long and, if it is the inside of the toe that is affected carry the bandage over the nail toward the inflamed structure. This, as you will observe, will have a tendency to carry the mass away from the nail. Beginning at the extreme end of the toe, carry the bandage back, with such pressure as the patient can comfortably stand, until the whole area of inflammation is included. Fasten it by means of a light gum band or tapes fastened to the end of the bandage.

The patient is then able to attend to his ordinary duties. The bandage can be removed at night and re-applied by the patient himself, if desirable, the first thing in the morning.—*N. Y. Med. Times.*

GYNECOLOGY.

Ludlam on the Physiological and Morbid Relations Existing Between the Uterus and the Eye.

Janot's work is based on the following conclusions:

1. Certain ocular troubles exist in relation with different physiological and pathological conditions of the uterus.

2. In order to institute an efficacious treatment it is important to establish their origin.

3. These ocular lesions are much more tenacious when the uterine troubles have persisted for a long time.

4. In a large share of cases they are attributable to infection.

5. The treatment should be addressed to the local condition of the uterus and the vagina, to the local state of the eye, and to the general condition of the patient.—*N. W. Med. Times.*

Report of six Consecutive Cases of Extra-Uterine Pregnancy. With a Clinical Report of four Additional Cases, Dr. Hall offers the Following Conclusions.

1. All cases of intra-peritoneal rupture of a tubal pregnancy are not followed by marked collapse, and this fact should not be overlooked and thus a mistaken diagnosis made.

2. If the rupture takes place in the early months of gestation and does not immediately prove fatal, the patient may, and frequently does, improve, and all of the symptoms disappear for a week or more, until another hemorrhage takes place; and this may occur several times.

3. All cases of tubal pregnancy should be operated upon at once after the diagnosis is made.

4. The operation is not a dangerous one, and, if made early, before the patient is exsanguinated, the prognosis is as favorable as many other abdominal operations, and much more favorable than by any other method of treatment,—*Cinn. Lancet Clinic.*

Menstruation in a Child Aged Six.

Jacobvitch (*Nouv. Arch. d'Obstet. et de Gynec.*) related this case before the St. Petersburg Society for Diseases of Children. At the age of three she was brought to Jacobvitch for hemorrhages. The genitals were normal. A considerable amount of a milky fluid exuded from the breasts, which were of the size of hen's eggs. The child is now over six years of age. She menstruates several times yearly, especially in summer. The period lasts from three to four days. Before the catamenia the child becomes ill-tempered; afterward she has headaches with vertigo. She is very anemic. The breasts are as large as small oranges; the labia minora and clitoris slightly hypertrophied.—Boston *Med. and Sur. Jour.*

OBSTETRICS.

The Influence of Treatment of a Syphilitic Mother, Especially During Pregnancy, on the Health of the Infant.

Etienne draws the following conclusions from the study of thirty-two cases of pregnancy in syphilitic women:

"1. The fetal mortality, in cases in which the mother has been treated, is enormous, reaching 85.5 per cent. If treatment be applied throughout pregnancy, we may hope to obtain almost complete immunity from this infant mortality.

2. Syphilis attacks the fetus especially during the fifth, sixth, and seventh months of intrauterine pregnancy.

3. Paternal syphilis is less injurious to the fetus than maternal syphilis.

4. The prognosis differs according to the stage of pregnancy when the mother becomes contaminated.

(*a*) If infection occurs during the first three months, and is not treated, the mortality during the first few days after delivery reaches one hundred per cent.

(*b*) The prognosis is a trifle better, if infection occurs during the fourth and fifth months.

(*c*) In one case of infection at the eighth month, the child lived and was apparently healthy; in a second similar case the child was in good condition at birth, but developed symptoms of syphilis later.

(*d*) Whenever suitable treatment was administered, the mortality was *nil.*

(5) In no case were any unfavorable results met with from internal medication during pregnancy."—*Amer. Jour. Obst.*